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Essays and Cases.

ART. I. *Practical Essays on Medical Education and the Medical Profession, in the United States.*—By the SENIOR EDITOR.

ESSAY III.

MEDICAL COLLEGES.

Medical Colleges, on their present plan, were not known, till since the revival of letters, in Europe. For two or three centuries, they were few in number, and chiefly sustained by the genius and labors of individual professors, of whom Boerhaave, Haller, and the first Monro, may be cited as illustrious examples. The 18th century augmented their number, and established their importance; but it was reserved for the 19th to multiply them to an unprecedented degree, and show, that they may be composed in part, of men, whom the pride of science would, formerly, have pronounced unfit for such a lofty and difficult duty.

In the United States, the number at the close of the last century did not exceed three: it is now at least fifteen, and others

are annually springing up. This extraordinary increase, may be ascribed, in part, to the great number of state sovereignties which make up our confederacy, each of which, instead of the federal government, grants college and university charters, and is ambitious to rival its neighbors in the number, if not the excellence of its institutions. But another cause is equally operative. This is the want of due care in the selection of professors; by which the standard of professional excellence is depressed to a level, that brings the office within the reach of unqualified aspirants, and offers to mediocrity of talents, a degree of encouragement which no age or nation ever before held out.

Did the best talent of the American profession find its way into our numerous schools, it cannot be doubted that they would be ably sustained; but truth and justice require me to say, that this is not always the case; and that every part of the union, presents men of loftier genius, sounder learning, and purer eloquence, than many of those, whom the trustees of our different institutions, from time to time, select as professors.

In most of our schools, the number of professors is too small. Some there are, or have been, which carry on all their operations, and graduate their pupils, with only four. Several have but five, and six are regarded as a *maximum*, which *need* never be exceeded. In Europe, however, the number is much greater; and in this respect we have unwisely departed from her example.

Nothing can be said in favor of this feature of our institutions. It has certainly not arisen from any new investigation of the principles on which medical schools should be established. It cannot be viewed but as the offspring of a competition, which has taken the downward, instead of the upward course, and offers a premium for pupils, in the small amount of its aggregate fees of tuition. Another aspect under which the same spirit manifests itself, is to be seen in certain schools, which have the ordinary number of professors, but charge little more than half the ordinary price for their tickets. Such institutions may be lauded as favoring the poor, but the real motive is,

the acquisition of students, by the only means they are competent to wield.

For myself, I am convinced, that every medical school *ought* to have eight professors; and that with less than six, it should, in the phrase of Lord Bacon, 'be noted as defective.' As to the distribution of the duties, there may be some diversity of opinion; but the profession, generally, would perhaps concur in the following: 1. *Anatomy.* 2. *Institutes of Medicine.* 3. *Practice of Medicine and Clinical cases.* 4. *Surgery.* 5. *Materia Medica.* 6. *Chemistry and Pharmacy.* 7. *Obstetrics.* 8. *Medical Jurisprudence.* In addition to these branches, some of the professors, if qualified, should, in the summer, deliver lectures on the elements of Botany, Zoology and Comparative Anatomy, Mineralogy and Meteorology; all of which have relations with the medical profession, which will be perceived and appreciated, in proportion as juster and nobler views of its extent and dignity are disseminated. If but six professorships are established, Physiology should be united with Anatomy; the remainder of the Institutes with the Practice; and Medical Jurisprudence distributed among the chairs of Anatomy, Surgery, the Practice of Physic, Chemistry, and Obstetrics; an extent of association, which at once discloses the magnitude and complexity of this neglected branch of the profession, and evinces the necessities of confiding it to a separate professor.

In all the medical schools of the United States, the lectures of each preceding year, are, as to topics, the same with the last, and there is no classification of students, according to the different stages of their studies. Hence, it is not uncommon, to see a youth, in the first year of his studies, attempting to comprehend lectures on the Practice of Medicine, Operative Surgery, and even Practical Obstetrics, while, by his side will be seated, a candidate for graduation, attending to the first lessons in Descriptive Anatomy and Pharmaceutic Chemistry. There must be something wrong in a system, which leads to so great a sacrifice of time. I am not prepared to assert, that it would be practicable, to class our students of medicine into juniors and seniors, and have lectures adapted to each division, but I

would strongly recommend, to every student who visits a medical school, to direct his attention, chiefly, during the first course, upon Descriptive Anatomy, the Institutes of Medicine and of Surgery, Chemistry, Pharmacy, and the Natural History of Medicines; reserving, as the great objects of study for the second course, General and Surgical Anatomy, Operative Surgery, Therapeutic Materia Medica, Obstetrics, and tthe Diseases of Women and Children. In proportion as he observes this order, his time will be efficiently employed, and his knowledge well arranged.

A still greater evil than any of these, is the short sessions of our American schools. In some, the session continues but two or three months, and four are the prevailing term. The late celebrated Professor Wistar, admitted to me, in 1816. that the founders of the Philadelphia school had committed a great error, in not establishing a session of six months, which would, doubtless, have been imitated by those who founded other institutions. The projector of the Medical College of Ohio, fixed its session at five months, which was, afterwards, unwisely reduced to four, although found to meet the approbation of the pupils. Were the different institutions of the United States, to agree to extend their sessions to five or six months, they would do more to elevate the profession, than could be done by any other single act; and all who wish well to the dignity of the profession and the interests of humanity, should unite in effecting so desirable an object.

By extending the term, the existing evil of so many lectures each day, would be obviated, and the student could find time to digest all that might be administered to him; as well as to compare what he should hear, with what he might see in the different text and standard works. Under existing circumstances, this is well known to be impracticable.

Four lectures a day, are as many as can be appropriated to itself, by an ordinary mind, and the number should never exceed five. But few students can listen to six, with as much advantage as they would derive from two-thirds of that number. They become cloyed and oppressed; and long before the end of

the fourth month, find themselves fatigued, impatient, and irritable, and prepare to depart. I have no doubt, that they would endure a session of six months, with fewer lectures, daily, in greater contentment, than they now bear our short sessions.

The daily succession of lectures, which requires the attention of the student to pass, rapidly, from subject to subject, which have no natural relations to each other, is trying to the intellect of pupils, and necessarily detracts much from the value of our instruction. For this evil, there is, perhaps, no practicable remedy; and students, generally, do not complain of it; as the change is refreshing, and serves to reconcile them to the wearisome existence of the lecture room.

Experiments and demonstrations are, or should be, the great object, in every medical institution. Much that is taught in lecture rooms, might be as successfully studied elsewhere; but Anatomy, Chemistry, Pharmacy, Operative Surgery, and Obstetrics, demand exhibitions to the eye, and no medical school is worthy of patronage, if deficient in the means of illustrating these important branches of the profession. Those, however, who endow and govern our institutions, should recollect, that the accumulation of the *materiel* of science, cannot be made a substitute for skill in its use; and that a department loaded with apparatus, will confer on students no substantial advantage, if the professor be defficient in talents and practical *tact*.

The subject of hospital practice, must not be passed over in silence. That it *might* be made a source of great improvement to students, no one can deny: that it *is* such, no one, I believe, will venture to assert. For a few weeks after the commencement of the course of lectures, the students are zealous in their attendance at the hospital, on prescribing days; bnt each one soon discovers, that in the throng, his opportunities for accurate personal observations, on the condition of the sick, are too few and momentary, to render his attendance in the wards of any substantial benefit; and his visits, thenceforward, become occasional and still more unproductive, because made under a feeling of discouragement. To derive benefit from hospital practice, students, who have the means, should attend up-

on it through the vacation, when the number is smaller, and the opportunities for personal observation, are, consequently, much greater.

Lecture room examinations are an important means of sustaining the attention of a class, but they are often misplaced, and sometimes worse than useless. The common practice of examining students, at the opening of a lecture, on the subject of the *preceding* day, is unfavorable, except when it serves to prepare the mind for the investigations on which the professor is about to enter. Whenever the topics to be discussed, are foreign to those of the last lecture, it should not be recalled, to preoccupy the attention of the students. Under such circumstances, a few questions on the matters which are to be immediately presented for examination, will prepare the minds of the pupils for engaging in them, and can never fail to awaken a spirit of inquiry. During a lecture, interrogatories on the subjects then before them, are well calculated to arouse the attention of the students from its passive condition, and contribute greatly to relieve the *tedium* of their situation. But it is at the close, that examinations are of the greatest value; as a recapitulation of the leading points, will, in this manner, be indelibly impressed on the mind.

Medical professors should be men of learning, but the lecture room is not the most proper place to display the extent of their book researches. The citation of a great number of authorities, is seldom profitable to students. They should expect from their teachers, an account, clearly and methodically expressed, of the ascertained facts of the science; and, in general, the less this account is encumbered with quotations and references, the better will it be understood, and the deeper will be the impression. Great learning may excite the admiration of students; but their thirst for useful knowledge can only be satisfied by accurate analysis, and the skilful arrangement, of common and generally admitted facts.

The abolition of the practice of publishing inaugural theses, seems to me to have been made inconsiderately. It has certainly destroyed one of the motives for close application, and

while it has relieved the candidate from some trouble and expense, it unquestionably has diminished his exertions. It is well known, that when inaugural theses were printed, the desire to afford, in their first publication, an earnest of future distinction, led many students into extended courses of observation, research, or experiments; which served to awaken them to a proper estimate of their powers, and by committing them to the public as young men of learning or genius, gave an impulse of character, which often continued through all after life.

The rule that a student may matriculate at any time within the first month of the course, leads to great procrastination in starting from home; and in its bad effects is only equalled by the absurd custom of leaving the university before the expiration of the lectures. They cannot be too strongly reprobated. In all the schools of the United States, these customs prevail to a degree, that calls for an immediate corrective. But a single week should be allowed for matriculation after the introductory lectures are finished; and the student who leaves the school without permission, before the end of the lectures, should not be allowed credit for a course, when he proposes to graduate. In losing the two or three last weeks of the session, he does himself much injury, and disturbs the regular progress of those friends who have greater firmness of purpose, by turning their minds upon home and its endearments. The whole evil would be corrected, by requiring them to take of the Dean of the Faculty, a parting ticket, and I cannot but hope that this practice will be adopted in all the schools of the Union.

I come now to speak of things which depend more especially on the students themselves.

Many students commence attendance upon lectures, without due preparation. If they reside, or prosecute their studies from the beginning, in the neighborhood of medical schools, they may, with advantage, begin the study of Anatomy, Chemistry, and Pharmacy, by attending the lectures on those subjects. But little advantage can result from their commencing other branches of the profession, in the lecture room. From twelve to eighteen months of diligent reading is necessary, to

prepare a student for listening with profit, and without confusion of mind, to lecturers on Surgery, the Institutes and Practice of Medicine, Materia Medica, and Obstetrics.

A timely entrance upon the course of the lectures, is scarcely less important, than a due preparation by previous studies. To avail himself of the full benefits of the session, a student should arrive and take comfortable lodgings, before the lectures commence. He thus brings his mind into a suitable condition for study, and, from the beginning, is able to derive advantage from what he hears.

Disorderly conduct and noise, in the lecture rooms, are great drawbacks on improvement. The idle and unambitious are, generally, the instigators of this confusion; which should be met and put down, by the public sentiment of the class, in conjunction with the moral power of the professor; neither of which is, in general, exerted in the manner it might be. Not a little of the disorder which lecture rooms present, arises from the practice of coming in after the lecture commences, and going out before it is finished. No member of the class should feel himself at liberty, thus to violate the laws of courtesy, and disturb the attention of those, who, unlike himself, are desirous of acquiring knowledge, the great end for which they are assembled.

Students should not only enter the lecture room in due time, but, as far as possible, return to the same seats, respectively; the advantage of which, both to pupil and professor, would be found in the uniform appearance which the room would present, from day to day, whereby the attention would not be distracted by new combinations and aspects of the class. Indeed, a return to the same seat is necessarily attended with an association of ideas, which is favorable to study, and, *cæteris paribus*, those who practise it most, will be most benefitted by the lectures.

The practice of cutting the benches, and otherwise marring, or eviscerating the room, should be punished, as a depredation, while the class should frown upon it, as puerile, and unfavorable to rapid improvement; which cannot fail to be more or less im-

peded, by the petty *violations*, which transform a beautiful and well ordered apartment, into a scene of dirt and desolation.

In short, students of medicine should be *gentlemen* in the lecture room, as well as the drawing room; and consider it discreditable, to abandon themselves to levity, mischief, and idleness; all of which are not less at variance with propriety than improvement.

Taking notes is an important employment of the lecture room, and one for which but few students are prepared. At the beginning of the course, most of them are zealous in this labour; but its difficulties, in many cases, speedily diminish this zeal, which is often succeeded by downright indifference. The pupil should be careful never to attempt too much, particularly during the first course. On Anatomy, Physiology, Chemistry, Pharmacy, Operative Surgery, and practical obstetrics, as a genral observation, notes should never be taken; and much of what constitutes courses of lectures on the institutes and practice of medicine, materia medica, the principles of surgery, the diseases of women and children, and medical jurisprudence, need not be recorded, because it may be found in the books. In the last century, when the practice of publishing every thing, did not prevail, as in the present age, the necessity of making notes was much greater. There is a value, however, in this labor, distinct from the manuscript information of which it puts the student in possession. It in some degree, secures and sustains his attention, and the extension and filling out of his notes, at his room, is a valuable exercise, leading to a kind of intellectual rumination, and favoring advancement in the important art of composition. Students, however, who can command their attention, and have retentive memories, would do well to write down but little, till they retire, when they should record such facts and principles, as appear to be original or of great practical utility. In the perception of these, more, perhaps, than in any thing else, will the discriminating or *instinctive* sagacity of the pupil, manifest itself. As students who write in the lecture room, can only record a part of what is said, they should exercise a quick, and, in loose phraseology, an intuitive judg-

ment, as to what especially deserves to be recorded; otherwise, in laboring upon the common-place, the new and valuable may entirely escape their attention.

All the reading of the student, during the session, should have a reference to the lectures. He will find time for no other, if he properly study the great variety of topics, which will be daily presented to his attention. In the prosecution of these, reading will be of essential service, as connecting, in his mind, the information received through the two senses, and from at least two teachers—the lecturer and the author. They will be made to rectify and illustrate each other, and the curiosity to see how far the former is indebted to, or surpasses, the latter, will prove a beneficial stimulus.

Conversation and examining clubs are productive of much advantage, provided they are conducted with order—that is, by fixed laws: if not, they are worse than useless, as attracting the student from solitary study.

Practical anatomy should engage the attention of every pupil. In a country where all physicians must, to a greater or less extent, be operative surgeons, every candidate for the profession should learn the use of the scalpel; and work his way, for once at least, through the intricate fibres of the human body. Having seen, and with his own hands separated the parts from each other, their forms and relations will be well understood, and remembered for a much longer period. Moreover, unforeseen events, or the development of a new taste, may at length incite him, who was, originally, disinclined to the practice of surgery in its higher operations, to turn his attention to that elevated department of the profession, when he will find great difficulties to encounter, unless, while a student, he acquired a facility in the use of the knife and scissors, together with a sound knowledge of the anatomy of those parts, which are the chief seats of the greater operations.

As to the number of courses, I would say, that all students who have adequate pecuniary means, should attend three, before they graduate; and the second, if convenient, should be in a different institution, from the first and third, which should be

in the same. I know from personal observation, that a great number of students graduate, prematurely; that is, without the extent and maturity of knowledge, which fits them for safe and efficient practice. It is a point of honor to graduate at the end of the second course, but the ambition of a student *should* be, to graduate *with honor*, rather than within a given time. Relaxation in elementary studies, is, commonly, the first effect of graduation; and he who is imperfect then, generally remains imperfect throughout life.

Almost all candidates have more or less perplexity on the subject of their inaugural dissertations. This arises in a great degree from delay. The summer preceding the last course of lectures, is the time, when the thesis ought to be prepared; but the majority postpone it till the midst of the second session, when its composition is attended with many difficulties; and sometimes keeps the candidate from the lecture room for several days, when his anxiety to be in regular attendance and prepare for his examination, is, generally, greater than at any preceding period. Such are the unsavoury fruits of procrastination.

Finally, students when in attendance on lectures, should look carefully to the preservation of their health. The new causes which may impair it, are, first, a more inactive and sedentary life; secondly, a fuller and more stimulating diet, than most of them have been accustomed to at home; thirdly, a change in the hours of eating, especially, breakfast and dinner, both of them being too late—the former, for an obvious reason, the latter, because, the appetite becomes importunate, and leads to gastric repletion; fourthly, in many cases abridgment of the hours of sleep; fifthly, intense and perplexing application of mind; sixthly, crowded and badly ventilated lodging rooms; finally, dissipated pleasures, into which they are too often seduced by the allurements of great cities, the common and most proper sites for medical institutions. From the operation of these, and other causes, the health of the medical students, during the session, is exceedingly apt to become impaired. The maladies to which they are the most liable are constipa-

tion, hepatic torpor and engorgement, dyspepsia, headache, chronic ophthalmia, palpitation of the heart, hypochondraism, *ennui*, jactitation, fidgets, and other forms of nervous irritation. With any of these maladies upon him, the student will make but sorry progress; most of them, however, might be prevented, by temperance, exercise in the open air, and general regularity of life and conduct.

I shall here present a summary view of the *desiderata* which our medical institutions seem to me to present; and can offer no other apology for the repetition it may involve, than the great importance of the subject.

1. An increase of the length of our sessions to at least five months. This could readily be effected, by a simultaneous resolution of the more popular and frequented institutions, in which our venerable *Alma Mater*, the university of Pennsylvania, ought, in justice to her age and relative rank, to take the lead.

2. An augmentation of the number of professors to at least seven, with a general refusal to recognize schools that have not more than four or five.

3. The election of professors for five or seven years, instead of an indefinite time; with the general understanding, that a re-election would in all cases take place, if the incumbent had acquitted himself with zeal and competent ability. If pupils were not compelled to take all the tickets twice, dull and unskilful professors would be neglected, and might at length, resign. But, as in nearly all our schools, the pupils are required, at each session, to purchase the whole of the tickets, the strong professors are made to sustain the weak, who of course do not resign, but clog the institution, impede its progress, and depress the standard of excellence. Septennial elections might prove a corrective to these evils, though I am not prepared to say, that a better could not be devised.

4. Students should not be allowed credit for a course, unless they matriculated by the end of the first week of the didactic lectures, and then remained to the end of the session.

5. At least four years should elapse, from the commencement of the pupil's studies, until his graduation.

6. He should be required to show that he is twenty-one years old.

7. Increased attention should be paid to the preparatory or academical attainments of candidates.

8. The examinations for a degree should be more searching than they are generally made. This, it is true, would diminish the amount of graduation fees received by professors, but the public would be gainers.

9. Every candidate should be required to publish his thesis; and a premium should be awarded to the author of the ablest of these productions.

10. Summer lectures, especially on the collateral and auxiliary sciences, ought to be encouraged, and the candidate should be required to have some knowledge of those branches.

11. A stricter regard should be had to the character of candidates, who should never be admitted to examination until they had deposited with the dean, satisfactory evidences of good reputation.

12. Lastly, as a means of promoting this object, and of advancing the respectability of the profession, there should, in every medical school, be a series of Sunday morning discourses, by the professors, on the *morale* of the profession, and the virtues and vices of Medical men, embracing their duties to their patients, and a system of medical ethics.

A strict attention to these different points, could not fail to improve the condition of our schools, and elevate the character of the American profession.

I shall conclude with a few hints to professors, on the means of making their prelections interesting and instructive.

A dull lecture is a great evil. Politeness may reconcile the majority of a class to such a lecture, but it falls dead-born from the lips of the professor. To listen, day after day, for several hours, through four months, even to animated speakers, is a serious undertaking; but to sit, from hour to hour, beneath those, who,

'Through the long, heavy, painful page, drawl on,'

is intolerable to all, who have not a facility in resorting to early and sound sleep; the usual and best resource, under such a calamity. As instruction is the object of all medical lectures, the end for which they were instituted will not be attained, if the attention of the class be not kept in activity. The moment it flags, improvement is at an end, and the professor had better fold up his manuscript, and permit the pupils to return to their chambers. There is an eloquence of the lecture room, as well as of the Bar and Pulpit, which every professor should attain, or feel himself in duty bound to resign, so as not to exclude a competent man. A commanding knowledge of the subject, is an indispensable prerequisite; but earnestness and animation of manner, are of equal importance; for without them, the profoundest learning and the acutest logic, are of no avail. At first, they may fix the attention, but, unaided by the arts of oratory, their power is soon lost, even upon the inquisitive and the resolute; while the remainder, *pars major*, neither hear nor think.

The faculty of awakening and sustaining the attention of an audience, is, in some degree, a gift of nature, and may be wanting, when other requisites are not. An original or eccentric manner, is often the secret of success; illustration by means of anecdotes, skilfully introduced, produces the same effect; episodes may be so managed as to answer the purpose; flights of fancy, if well timed, will accomplish the end in view; while, in the absence of a talent for the whole of these, unexpected and pertinent questions, with familiar, conversational remarks, on the answers that may be given, will resuscitate the drooping energies of the class, and enable them to hold out to the end. Professors who speak *ex tempore*, have, in this respect, a great advantage over those who read manuscripts, for the speaker *must* think, while the reader *need* not; and the class will generally follow their example. It has been objected to extemporary lectures, that they are apt to be repetitious, and deficient in method. Precision and arrangement, however, depend more on the mind of the teacher, than the circumstances under which his lectures are delivered. But in sciences so imperfect

as most of those taught in our medical schools, a natural arrangement is not practicable; and extreme attention to method, is often prejudicial, as it leads to assumptions, and the introduction of dubious facts, to eke out an argument, which, in the present state of the profession, should be left defective. Written lectures, moreover, are not easily altered, and, when once finished, are apt to be kept nearly in their original condition. Thus, what might have been as perfect, at first, as the state of the science permitted, is soon left behind, in the march of improvement; while the annual repetition of the same *formula* of words, diminishes the simplicity and force with which it is pronounced;

'And every year grows duller than the last.'

ART. II. *Hints on the Morality of Medicine.*—By THOMAS D. MITCHELL, M. D., *Professor of Chemistry and Pharmacy, in Miami University.*

OF all the arts and professions in society, we are aware of none, in which improvement has been so great and unceasing, as in the profession of medicine. In all the departments, the hand of discovery has been constantly at work; and in modern times, the most laborious investigations and the most untiring researches have been pursued, in order, if possible, to elevate the science, as a whole, to the highest order of perfection. Let us glance for a moment, by way of illustration, at the almost magical operations of chemical analysis. We there behold the finest specimens of accuracy and scrutinizing inquiry, that are to be seen in any of the departments of human science. Results have been obtained, at which no one, a century ago, had ventured to direct even his thoughts, and although among the reputed discoveries of an eminent modern philosopher, there are some to which he has only a questionable claim, yet enough is to be seen, resting on the sure and unmovable basis of fact, to justify our assertion in respect of the steady, onward march

of medical science. For although the chemical researches of recent date, may be fitly ranked among the trophies of the science of chemistry, the ultimate tendency of all them is to give perfection to the art of healing. As evidence to this point, I have only to refer the reader to the labors of Sertuerner, Robiquet, and others in France, and Carpenter, Staples, &c., in the United States of America. These gentlemen have furnished some very powerful auxiliaries in the remedial department of our science, as, for instance, cornine, salicine, morphia, emetine, and others, which I need not here enumerate.

Similar remarks might be made in relation to botanical improvements, and to the advances of every variety of medical investigation; and the conclusion from the whole would be, that the legitimate end of all this diversified research, is the perfection of the medical profession, as a unit.

But, however diversified, incessant, and laborious the exertions of scientific men may be, for the attainment of the great object in view, and notwithstanding the apparent elevation which our profession acquires from these sources, something additional is requisite. The edifice may be grand; its walls may be firm as adamant, and its foundation unyielding as the rock; but it is unfinished still. There is a deficiency within and without, which neither chemistry, nor botany, nor anatomy, nor any branch of science, ordinarily taught in medical schools, has the power to supply. And it is the design of this paper, in a very brief manner, to set forth the proper remedy for this defect.

By the morality of medicine, we simply mean, the exemplification of all the essential principles of good morals and virtuous conduct in the practice in the art of healing. We intend to say, and wish so to be understood, that a vicious and immoral man, cannot be a truly good physician, even though his attainments exceeded those of Boerhaave, and his fame outstripped the reputation of Hippocrates. We are aware, that such an assertion comes in direct collission with the common parlance of society, and is at variance with the prevalent notions of every community. But were these objections of any

value. they might be brought to bear with mighty force, against all the finer feelings of the human breast, and their ultimate tendency would be, to turn back the tide of civilization, and to restore the crown to savage life.

Our intention, on the present occasion, is to consider but three of the features of the morality of medicine, and these will be found to include, essentially, all that is important in the subject; they are *veracity*, *temperance*, and a *respect for divine institutions*.

First, of *veracity*. And here I may premise, that the physician, whose conduct is evidential of a strict regard for veracity, as based on the solid foundation of true virtue, cannot fail to exhibit in his deportment, the other items of professional morality. But, there is among medical men, so lamentable a destitution of the points of character already cited, that it is needful, to be somewhat specific in the examination of these topics. Nor do I dream of doing a service, in this feeble effort, to any who have grown grey in the practice of bad habits; they will not condescend to read any remarks, or if they do, will pronounce them foolish and weak. I am not, however, in despair respecting the juniors of our profession, and of those who are about to enter upon its important and arduous duties; to them, in an especial manner, are these hints directed.

The advantages of veracity may be discovered from negative as well as from positive sources. And we can, in no way, so well appreciate its importance, as by taking a survey of the evils resulting from a neglect or destitution of this moral quality. The physician, who cares not for his word, whether he be found in the private walks of practice, or in the public arena, as a teacher, very soon finds his name associated with epithets of disrespect, and his integrity becomes so intangible, that it is difficult to determine whether it has any real existence or not. We sometimes witness a disregard for veracity, in statements of cases of disease, which never had any other than an imaginary form. Various motives often prompt medical men to talk and write about strange and inexplicable morbid phenomena, the creatures of their fancy, which, were they permitted to occupy

their legitimate place, might prove very harmless tenants; but the inventors, desirous of reaping a little fame, at all risks, must forsooth tell out their story, and that is not the worst feature of the case; there are some persons sufficiently credulous to believe the well dressed fabrication. I know more than one individual, who, if fame tell the truth, always has a case at hand, to justify his mode of practice, and if one will not suffice, his inventive mind readily furnishes a second and a third, and as many more as the circumstances may seem to require. The result of this foolish and utterly ridiculous practice, is not dissimilar from the fabled fate of the boy and the wolf. Ultimately, all confidence is lost, and that which, in other hands, might occasionally produce much effect, is here a matter of entire waste.

The habit of falsifying has tended more than any other cause, to produce strife and bad feeling in the medical brotherhood. I do not believe that any serious difficulty ever existed among professional men, in any village or city, that had not for its principal source, a disregard for veracity. This has been seen in the frequent exaggerations of stories, and the cameleon-like gloss which has been put upon them, which in their simple and unvarnished state, were altogether harmless. The professed and disciplined tale-bearer cannot long possess the *esprit du corps*, without a departure from the law of veracity; and hence we find universally associated, the love of tattle and the lack of this fundamental principle in good morals.

The want of veracity often lays the foundation for that neglect of punctuality in consultations, which has extorted from some of the veterans in our profession, such loud and repeated complaints. "Every hour of my time," said an eminent professor in Pennsylvania, "is worth a guinea, and I cannot agree to consult with men who value time at so cheap a rate, as to oblige me to wait their convenience a full half hour beyond the specified period. Such neglect is not simply a positive loss to me, but it is an evidence of the want of interest in the particular case." Another professor, in one of his valedictory addresses, cited the case of an English nobleman, to enforce the

duty of punctuality. The nobleman remarked to a friend, somewhat in the following strain; "so utterly do I abhor and detest the least semblance of falsifying, that if I had made an engagement with a peasant to play a game at push-pin, in the remotest corner of my forest, at a specified moment, no earthly consideration should induce me to fail in the strict fulfilment of the contract." And, if in a matter of so little moment, a nobleman could thus feel and act, in what regard should a physician hold his solemn promise to meet a professional brother at a stipulated point of time, to consult on matters involving all that is dear in life, or terrible in death? I know that circumstances may occur, to prevent the punctual observance of the consultation hour, and I most cheerfully make allowances for them. But when a reckless negligence of all the rules of propriety in these matters is apparent, when the evil complained of is habitual, the plea of circumstances is out of the question and goes for nothing; and I fear it will be found to be a truth, with very few exceptions, that the man who makes shipwreck of his veracity in the important business of consultation, has made a voluntary abandonment of this finest feature in medical ethics.

Appalling evils have found entrance into *medical schools*, by reason of departures from the sacred obligations of truth, and some of these institutions, whose dawning day was bright with hope and indicative of ultimate success, have sunk beneath a cloud, whence the thunder and lightning of violated faith have issued, to do the work of ruin and desolation. A single individual in a medical school, who is regardless of the high and solemn sanctions of truth, may and will, if providence interfere not, bring anarchy and overthrow upon the most prosperous establishment. Who then can remain unconcerned in a matter of such momentous consequence? If the want of veracity be, in reality, so prolific of evils to individual physicians, and to associates of Medical men, is it not of the last importance, to en force, by every suitable argument, the indispensable necessity of this virtue, upon those who are preparing to enter the temple of Esculapius, but who have not yet passed its threshold? I call upon those who occupy the responsible station of preceptors,

whether private or public, to consider well the nature of their duty. On them, to a great extent, rests the formation of Medical characters, and they must answer at the bar of public opinion, if no where else, for the faithful, upright discharge of the trust committed to their hands.

It were easy to enlarge on this highly interesting subject, and to show the importance of veracity, in its *positive* operations; but as I am desirous to edify the reader, rather than to weary his patience, I shall pass to the second topic named in the commencement of this paper.

Of Temperance. This term, in its general acceptation, has reference to the subjection of every inordinate desire, or propensity to which human nature is prone. Every practice or habit, the effect of which is to derange the physical or mental operations, and so unfit the man for the ordinary business of life, and especially for professional duty, is at war with the fundamental principles of temperance. Hence not only is excess in eating or drinking, a violation of the law of temperance, but the indulgence of malignant passions, and the withholding from nature her just claims of proper hours for repose, by intense study, are alike transgressions of this moral statute. But my design, at present, is to expose the odious vice of intemperance in the use of intoxicating liquors; because, more than any other or than all other departures from the principles of temperance, this vice degrades and brutalizes the physician, who sinks beneath its fearful influence.

It is matter of congratulation, that so many worthy members of our profession, have taken a decided stand in favor of the most rigid temperance. All that is requisite in order to complete success, is to subvert custom. Let physicians of high standing and exalted rank establish the fashion in this thing, and the work of reformation will be accomplished with facility. the combined influence of one hundred leading men in the profession of medicine, would suffice to cover, with enduring infamy, the worse than savage crime of drunkenness.

To effect a reformation in this matter, more is requisite than the simple writing or delivery of addresses. The force of ex-

ample is no where so conspicuous as here, and the physician who would acquire a reputation for consistency in the matter of temperance, will not only abstain from the personal use of intoxicating liquors, but will make every laudable effort to expunge them from the Materia Medica. Well do I remember the emphatic manner in which a public medical teacher charged upon our profession the crime of making drunkards by wholesale, as the result of alcoholic potations prescribed for the cure of intermittents, who himself fell a martyr to intemperance. Like too many in the present day, his precept and example were the antipodes of each other.

But the work of reformation, as respects the medical profession, must have its beginning in early life. The student must be impressed with the importance of temperance, at the commencement of his enterprise. I would not, for all the wealth of these United States, be accessary to the introduction of a young man within the pale of our profession, who had imbibed a love for intoxicating liquors. Were his talents and acquirements of the highest order, his deportment, in general, amiable, and his connexions in life of the most respectable sort, this solitary blemish would mar the whole, in my estimation. To all young men, who have the profession of medicine in view, I would address the warning voice and friendly counsel, in this critical matter. Beware of intoxicating liquors, in whatever shape they meet your eye. They have within them the elements of destruction, infamy, and death. As you would escape the frightful storm that gathers in the distant sky, and which shall presently beat with relentless fury on the unsheltered traveller; so I beseech you, shun the intoxicating cup, whose poison is daily and hourly prostrating in the grave, the finest talents and the fairest prospects.

It may not be unavailing to reiterate a remark already made in reference to the expurgation of the Materia Medica of spirituous formulæ. Professor Sewall, of the District of Columbia, has taken an honorable stand in this aspect of the temperance reformation; and the writer of this paper has made a humble contribution in the same cause, as may be seen by reference to

the Journal of Humanity, for the year 1830. Sufficient evidence has thus been accumulated to show, that if alcoholic medicines cannot be entirely excluded, at least, a very large portion may be dispensed with, in the treatment of disease. I firmly believe, that a combination of medical men, assisted by a suitable apothecary, could effect such a revolution in the Materia Medica, as would ultimately redeem our profession from the odium that has so long and so justly rested upon it. I have made the experiment, single handed, on a small scale, and the result has been, that not one spirituous article now in use as an internal remedy, is indispensable in the successful practice of medicine. And if this persuasion could be made general, it would tend powerfully to the promotion of temperance among medical men. For the constant handling of tinctures, a circumstance peculiar to country practitioners, leads to the occasional and frequent use of such of them, as are not absolutely unpleasant or disgusting to the taste; and hence it is, that intemperance is more frequent among physicians in country situations, than among city practitoners, who are not compelled to compound their own prescriptions.

I am aware of the errors in public judgment, respecting intemperate physicians, and have seen, with regret and astonishment, some well-informed and influential men, bestow their patronage on practitioners, who had become habitual drunkards. And I know, too, that intemperate physicians almost always leave behind them, at least, one legacy for the benefit of society, and that is, a character for pre-eminent skill. Who ever heard a tea-table history of such a physician, that did not embrace a high-toned commendation? "Poor fellow, he had but one fault, but yet he was the greatest physician, the most skilful doctor that ever practised in our village." But the feebleness of human discernment in these matters, offers no solid argument against the position we are defending; and should rather operate as an incentive, to retrieve the profession from the disgrace that intemperance has brought upon it.

In a discourse on the medical character, published in the New-York Medical Repository, about fourteen years ago, I pro-

posed that all Universities and Colleges, conferring the degree of Doctor of Medicine, should be invested with retrospective powers; that in addition to their right of judging of the qualifications of candidates for degress, they should also exercise a supervision of all, who, from time to time, had the honors of the school conferred upon them. In the discharge of this duty, it was suggested, as highly proper, that the authority to practice medicine, which had been given in consequence of the exhibition of suitable talents and acquirements, should be taken away entirely, or suspended for a time, when palpable evidence manifested a disqualification for professional services, arising out of criminal conduct or vicious deportment, of any sort whatever. My opinion in this matter is not changed, but confirmed; and I humbly submit to the consideration of my brethren, whether such a provision would not be better calculated to expel intemperance from our ranks, than any other that has been proposed. It might fail, I grant, to cure the individual of his moral malady, but it would, most certainly, rid the fraternity of all the habitual intemperance that now fastens on it, and, by the public examples thus made, it might prove a salutary warning to the juniors of the profession.

The last item to be noticed in the consideration of the *Morality of Medicine*, is *respect for divine institutions*. And in briefly examining this important subject, I shall restrict myself to two vices, only, both of which are prevalent, to a considerable extent, among the members of our profession; they are, *profanity*, and *disregard for the Christian Sabbath*.

In relation to the charge of profanity, so often preferred against medical men, we may be permitted to say, that fashion, or perhaps a better motive, has operated to make the crime much more odious in professional estimation, than it was formerly considered. But there is still much ground to justify the allegations so frequently repeated, and it becomes every lover of sound ethics, to act vigorously in order to extirpate every root of so noxious and unsightly a weed.

There was a time in this country, when moral, or rather immoral monstrosities, were admired, and when hard swearing

and profane jest, seemed to serve the purpose of unfailing commendation. A physician in an eastern city, gained an immense practice and an irresistible influence, chiefly from this source. He flourished, it is true, nearly eighty years ago, when refined manners were not so fashionable as in the present day. His was not the occasional or accidental oath, but the continued blast of vulgar profanity, which, while it set all human courtesy at defiance, poured contempt and malignity on the divine character. Nor did his popularity rest merely on the patronage of men like himself, but some who held his immoralities in utter disgust, were weak enough to seek his aid in the hour of sickness. I have heard this individual's name quoted, as proof, that it was of no consequence, what a man's moral character was, provided he was master of his profession; and this is the sentiment of many persons in the present day. It is presumable, however, that such conduct can receive the approbation of no one, whose moral sensibilities are not blunted, and whose taste is not morbid in the extreme. Indeed, posterity has judged rightly of the individual just referred to, and made some amends for the foolish and perverted judgment of a misguided ancestry. His name is seldom mentioned, without a simultaneous association with all that was depraved and savage in his character. Let those who would justify a similar deportment, by reference to so odious a precedent, give to the entire history its legitimate application, and we believe, that, instead of pursuing the course of profanity, in the expectation of reaping the same professional success which marked the career of their exemplar, they would shun his beaten path, fearful of the honest verdict of after times, which, on all their ephemeral glory, would write infamy and disgrace.

I know that a good deal of moral courage is required, to enable a young student of medicine to resist the manly example, as some call it, of his fellows; and hence it is, that the vice of swearing is so common in medical classes. Some there are, who call themselves men of honor, and who would not refuse a challenge to fight a duel, who are too dastardly to look puerile impudence and arrogance in the face, and to frown from their

presence, the foul and ungentlemanly oath. The young man who furnishes evidence of bravery, sufficient to meet such an emergency, by a deportment which virtue only can inspire and maintain on a solid basis, has infinitely more, and better fortitude, than the profane and profligate duellist, who has killed his man, once and again. It cannot be supposed, that any man becomes a swearer from the mere love of profanity, or that, in his calm and reflecting hours, he can obtain the acquiescence of his judgment, in respect of such gross derilections from the path of rectitude. We envy not the moral darkness and the mental torpor of that profane individual, whose solitude is not occasionally disturbed with harassing thoughts and appalling spectres. And yet, it is conceivable, that a man may so fasten the vulgar habit of swearing upon himself, as to be almost insensible of the practice, until the custom shall seem to constitute a law of his very nature.

There is no class in society, excepting the ministers of the gospel,* on whom habits of profanity sit with so ill grace, as on physicians. Next to the clergy, their example and influence is regarded, in all that is dear in social and domestic life. They operate in their respective spheres of duty, on families and individuals, with an irresistible power, and many characters are predicated of their example. Surely, then, it is matter of deep importance, not only as respects the dignity of our profession, but in regard to probable influences on the moral aspect of society, that medical men should, by precept and example, evince their utter abhorrence of so debasing a vice.

In very near relation to the crime of profanity, stands the allegation of neglect and contempt of the Christian Sabbath, and of all religious exercises connected therewith. I am conscious, that in noticing this moral defect, I do not proceed on ex parte testimony; for my own early history, like that of almost all students of medicine, furnishes the total amount of evidence that can be offered, in defence or justification. Engaged in the

* We intend no reflection on the clergy, although it has been our misfortune to know more than one, who was *called* a minister, who was profane.

prosecution of studies, whose legitimate tendency is to inspire the mind with exalted views of Deity, and which proclaim, with mighty force, the doctrine of an intelligent, superintending Providence, the vanity of the merest stripling leads him to the idiotism of atheistic folly; and, bloated with a degree of self-importance, that evinces the actual imbecillity of the man, he repudiates the authority of Heaven, and sneers at all the institutions of the Christian religion. Nor does he regard, as of any value, the testimony of those who once thought as he does, but who have been induced to change their views, and to reform their practice. They, too, in his estimation, are weak-minded, fanatical, and the easy dupes of superstition and priest-craft, while he, forsooth, is wiser than Solomon, and carries the key which opens the temple of knowledge, in his right hand. I know not whether to pity or despise the frothy ebullitions of a half educated adventurer in medicine, who, puffed out with self-esteem, almost to the point of bursting, would force the ignorant to believe, that it were an easy thing to make a world; and that to regulate the operations of Nature, neither law nor intelligence were necessary. Yet such philosophers there are; and in their wisdom, they cast away the restraints which religion imposes, and choose to be governed by no authority, unless it be *chance*.

But it is matter of rejoicing, that our profession boasts of other philosophers than these; of men whose names and virtues shall flourish in the bloom of youth and beauty, while the memory of the atheist shall be blotted out, or engraved on the records of infamy. Yes, we do rejoice in the truth, that Sydenham, and Boerhaave, and Fothergill, and Locke, and Rush, and Good, were advocates of the Christian religion; and, standing behind the bulwark which their names have assisted in forming, the onsets of the enemies of good order, can do no harm, and should, therefore, excite no apprehensions.

The importance of the Christian Sabbath, not less as a civil than a moral institution, is so generally admitted in society, that it were a sort of moral treason, openly to reject it; and the code of laws which fashion has formed, is so modified, as to

give, at least, a silent consent to its authority. And, let me ask, what can a physician lose, by a strict external regard to this institution; and on the other hand, may he not be a gainer, by a respectful observance of the duties connected with it? The testimony of one of the most learned men in another profession, has been often adduced, in the consideration of the matter before us, and must ever be in point. That ornament of the law, Sir Matthew Hale, long ago declared, that just in proportion to his strict observance of the Christian Sabbath, was his success in all the business of life; and men of the highest professional eminence in our own country, have borne repeated testimony to the same cardinal truth. So deeply am I impressed with the importance of this subject, that I do not hesitate to affirm, that the physician who neglects or contemns the institutions of religion, has no right to calculate on professional success, however great his attainments, or vigorous his powers may be; although I will not say, that some grossly immoral practitioners have not grown wealthy. But let it be recollected, that to amass wealth by practice, is a different thing from the acquisition of professional eminence and success. He whose talents and virtues have elevated him to an exalted station in the view of his brethren and of society, although he die a bankrupt, leaves behind him a more valuable treasure, than the avaricious and penurious practitioner can possibly bequeath, who cares not for laws, human or divine, but who glories in his stocks, and houses, and lands, and in them only.

Let the student of medicine seriously consider this subject. His future prospects, his character in society, will correspond, in all probability, with the moral sense which he is now acquiring. This is the crisis; the turning point in his history; his destiny hangs upon it. And when men in high places, set before him the pattern of immorality and infidelity, let him not forget the names of the *greatest among the great*, who, while they shine in the firmament of science, have left behind them an imperishable testimony in favor of virtue and good order.

ART. III. *On the use of Mercury in Syphilis.*—By JAMES M. STAUGHTON, *Professor of Surgery in the Miami University. Read before the Cincinnati Medical Society.*

The tenacity with which the human mind clings to its earliest impressions, is one of its most interesting properties. Though it sometimes impedes us in the search of truth, it more frequently prevents the hasty adoption of error, and forcibly urges that philosophic doubt, which marks the progress of every accurate mind, in the investigations of science.

Most of us in the first rudiments of our medical knowledge, were taught to believe, that in Syphilis, mercury was the solum et unicum remedium; we were taught to regard it as the sheet anchor, as the ultima ratio.—Did we not step forward into practice with the firm conviction, that in all cases of the venereal disease we had a sovereign balm? Did we not look at those unfortunate cases, in which the disease was aggravated by mercurials, as the results of malpractice, and have we not regarded our professional brethren under whose treatment such cases have occurred, with doubts and suspicions as to their faith in the remedy, and the judgment with which they have employed it? I fear we have—I, at any rate, am free to confess that I have. I do not recollect any conviction that was so deeply rooted in my mind as that of the infallibly specific powers of mercury in Syphilis. But twelve years have taught me that there *are* some forms of venereal disease, that not only refuse to yield to the powers of mercury, but which are increased in violence, by its exhibition.—My early prejudices are now, in a manner, overcome, for I have discovered that some of them were founded in error.

It is not my intention to lay before this society a confession of my faith, but to take a rapid glance at the changes in the professional opinions of this subject, that have been wrought in the United States within the space of a few years. I am aware, that the usual limits of a paper will not allow me to do justice to the subject, and can scarcely expect to throw any light upon it,

but I shall be gratified if I shall succeed in presenting matter for discussion, and if I shall be able to elicit from the senior members of the society an expression of their views, sanctioned by extended observation and experience.

The very valuable work of John Hunter on Syphilis established the use of mercury. It cannot be denied, however, that previous to his time, surgeons were found in various parts of the world, who made a practice of curing this disease by other means. It was understood, too, and fairly admitted, that in warm climates the venereal disease lost much of its severity, and was frequently cured by diaphoretic, and other mild measures. But Hunter's book came out with a weight of authority almost irresistable, and boldly placed in an imposing attitude, that the primary ulcer of Syphilis could not be cured without mercury, but would go on, becoming progressively worse and worse. The doctrine was at once adopted in Europe and brought over to this country by his pupils, who promulgated it here with that ardor and enthusiasm that has characterized all their efforts. With the first teaching of medical science in the United States, therefore, was the specific virtue of mercury enforced.

Several of the constitutional affections which were noticed in the mercurial treatment, such as the ulcers in the throat, blotches on the skin, nodes on the bones, and pains in the limbs were, by some, attributed to the employment of the mercury. Considerable excitement prevailed on this subject; the friends of the established method insisting, that it was the natural progress of the disease, kept under indeed by sanative powers of the remedy, while the heterodox were loud in the abuses which they heaped on the mercury. This seemed to open the eyes of medical men, and immediately close and accurate observations were instituted. It was soon perceived that there were cases of venereal ulcers, which, even though salivation had been produced, would run on to constitutional lues, and that under these circumstances, mercury most certainly and absolutely aggravated it.—With great slowness and much caution was this fact admitted, but admitted it was, for I believe the most

strenuous advocate of the malpractice would not dare to deny its correctness. Mercury then was considered as injurious in some of the ulcerations of the penis, which eventuate in constitutional symptoms.

While these subjects were held by the profession under consideration, intelligence was brought from Europe of new and imposing views of Syphilis. Surgery unlike other branches of science is not retarded in its progress by war. During the numerous and varied conflicts that succeeded the French Revolution, many important additions were made to the stock of chirurgical knowledge.—Men, collected in immense masses, afforded ample field for the observations of those learned and intelligent surgeons, that were placed high in command in the respective armies.

The British surgeons, observing the mildness which the venereal diseases wore on the sunny plains of the Peninsula, were induced to try the effects of other then mercurial remedies.—They quickly perceived that cleanliness, a few saline cathartics and the use of antimonials were all that was necessary, in addition to copious dilutions of guaicum and sarsaparilla, to cure most of the cases of chancre that presented.

The next step was perfectly natural. They introduced the same mode of treatment into the British Islands and found similar success to attend it.

The immense number of cases which have been reported, by the army board, of cases treated in England, Ireland and Scotland on these principles has given the practice a high and commanding reputation.

Without going more extensively into the historical details; I shall take up the examination of the following questions as being perfectly relevant to the present state of our knowledge on this subject.

1. Does the use of mercury form or contribute to form any of the constitutional symptoms of Syphilis?

2. Does mercury ever aggravate any form of Syphilis?

3. Are there any forms of Syphilis that can be cured without mercury?

4. Is there reason to believe that there is more than one form of venereal virus?

5. Is there reason to believe that the venereal poison has undergone any change in its nature or virulence.

6. Is mercury *ever* necessary in the cure of Syphilis?

To the first question, does mercury form or contribute to form any of the constant symptoms of Syphilis? I return boldly and unhesitatingly, the answer, no! The reaction which has occurred in the professional sentiments of some, as to the value of the remedy, is as violent against it, as were the previous prejudices blind and obstinate. Every possible variety of injury is now ascribed to the use of mercury. We want proof, however, of the *existence* of these injuries. For, in the first place, it is known, that the usual train of constitutional symptoms, will arise in a neglected case of true chancre, where not one single atom of mercury has been given.

In the second, we know that mercury, when administered in large quantities for the cure of other complaints, does not produce these symptoms. The testimony of Mr. Carmichael, on this point, is, by far, too important to be omitted. "I beg leave to observe, that I have not, nor do I believe that any person has, witnessed ulcers on the skin, and throat, and nodes, or the bones, from the exhibition of the most extensive courses of mercury, in any other than venereal diseases, nor even an eruption, except the well known mercurial eczema."

The establishing of these two points, in my opinion, settles the question most absolutely. We pass on, therefore, to the second question. Does mercury ever aggravate any venereal symptoms? I shall never forget the manner in which my mind was brought to the conclusion, that it was possible for mercury to act in this way. A gentleman applied to me with a large ulcer on the back part of his throat, covered by coagulable lymph, which resembled a piece of thick wash leather, glued on. I pronounced it, at once, a venereal affection, and confidently promised him a speedy and effectual cure. I employed mercurials, in the firm expectation, that so soon as his system came to feel the mercurial impression, the ulcer in the throat would experience a decided improvement. I was much

surprised, however, to find, that as the action of the remedy increased, the throat became worse, the original ulcer spread, another formed, and before I was well aware, a considerable portion of the soft palate was implicated in the ulcerative action. Very fortunately for the patient, about this time, he lost all confidence in me and my remedy, and withdrew. In a short time after, an old woman cured him, with a milk diet and sasafras tea.

I appeal with confidence to the members of this society, and ask them, whether they have not, in their practice, met with similar cases.

It is with the results of an extensive experience of the injurious effects of mercury in certain cases, before my eyes, that I am prepared to offer as an answer to the query, that, in some venereal diseases, mercury acts as a poison, and positively aggravates the violence of the symptoms. There is no point in the whole circle of medical opinions and practice, on which I am more completely fixed and established. I have seen it, and to my great mortification, I have had my feelings, as a professional man, lacerated by the tardy discovery of its truth. I do not know any sensation more grateful to the mind of an honest man, than the acknowledgment of error. It teaches the individual, and those with whom he is connected, that the love of truth, is superior to the love of self; and, in this view, without the slightest emotion of shame, I have no hesitation to confess, that I have, on many occasions, done much injury to my patients, by the indiscriminate use of mercury in Syphilis. But, may I not ask, as Broussais did, on an occasion when he confessed he had done wrong by not bleeding his patient, through fear of debility, "but who was to blame?" Most certainly I was not. How far my teachers, or the books they had placed in my hands were, it is not for me to decide.

The third question, "Is there any form of venereal disease that can be cured without the use of mercury?" involves principles of much importance to us all. A question recurs with great force: What, then, is meant by venereal disease?

It is not every ulceration of the genital organs. These organs are subject to a variety of ulcers, which are certainly not

syphilitic, as is evident from their being destitute of the ordinary marks of chancre, the hardened edge and base; yet most practitioners look on them as such, imagining that some peculiarity of the disease's action, deprives them of their usual characters. These ulcerations, often attended by a considerable degree of inflammation, may arise from the peculiar secretions of the organs themselves, or by connection with those who are troubled by such affections. Leucorrhea in females, and particularly the discharge from incipient cancer of the uterus, will often occasion them. Mechanical abrasions, and other injuries, will sometimes cause them. No one will, for a moment, doubt the possibility of curing such ulcerations, without the use of mercury, and yet we often see that powerful remedy employed in cases of this character, where its energies are as much misapplied as they would be, in the healing of a simple incised wound.

But the views of the European non-mercurialists, go still further. Denying, totally, the truth of the axiom of Hunter, that no chancre can be healed without mercury, they say, in the language of Dr. Hennen and of Professor Thompson, "that all sores on the sexual parts may be healed without the use of mercury, in any form whatever." I am by no means prepared to go this length. I will admit no such sweeping assertion. Yet I cannot deny that there are cases of ulcers, which ought certainly to be called syphilitic, which have been cured, and which I myself have cured without mercurials.

4. Is there any reason to believe that there is more than one form of the venereal infection? Very certain it is, that the venereal disease varies much in its effects, both locally and upon the constitution. What diseases can be more different from each other in their consequences, than the true Hunterian chancre and the primary phagedenic ulcer of Carmichael, or the Black lion of the South of Europe, or Mr. Travers' Swan alley ulcer?

We want facts to prove that different individuals may not contract the various diseases, from the same infected person. All the variations of the disease may be ascribed to peculiarity

of constitution; and till it can be proved that a woman, infected with any one form of the disease, shall communicate that form alone, to men who have connexion with her, the assumption of the different kinds of the syphilitic virus, is purely gratuitous. And as the varieties of constitutional peculiarities are amply sufficient to account for the varieties of the disease, according to the Newtonian principles of induction, we must wish that to rest satisfied, while the whole *onus probandi* of the question is thrown on those who espouse the opposite side.

To the 5th question, I answer, that an investigation of the history of syphilis cannot fail to produce on the mind of any one, the conviction that the disease has been, gradually, growing milder, and that it is not now what it once was. But at the same time, it is rather stepping beyond the bounds of truth and reason to assert, that it is not possible, at the present day, to find a real chancre on the face of the earth, and yet this opinion is held by some of the most distinguished men in this country and in Europe. My own impression is, that the disease has become milder since the days of Hunter, for, independently of the observations which I have made on the cases which have come under my particular notice, I can scarcely conceive it possible that a man of the exact and discriminating mind of Hunter, could have been so very much mistaken in the results of his numerous experiments, as to have made such a confident assertion of the truth, of what is now found to be false. But I do not stand here as the champion of that clarum et venerabile nomen. The reputation of Hunter needs no defence. How far this amelioration may enable us to dispense with the use of mercury, is not, I presume, exactly understood.

To the last question, Is mercury ever necessary? I answer yes. I believe the most violent opposers of mercury do not go so far as to exclude it entirely. Mr Hennen tells us, that in every primary sore, he would dispense with the use of mercury at first, and trust to cleanliness, rest, and abstinence.

"But," says he," if, contrary to every calculation, it remained open, I should certainly not sacrifice every dislike to mercury,

knowing how many persons have been seriously benefitted by a judicious and mild administration of that remedy."

On a retrospect of what has been said, and on a general view of the whole subject, I am still strongly inclined to place implicit confidence in mercury, as the great remedy in Syphilis.

The injurious effects which this powerful agent occasionally produces, in cases of genuine syphilis, are to be attributed to some disorder or derangement of the constitution which existed before the infection.

Soon after I began to see those dreadful cases, in which the disease seems to spend its fury on the throat, bones, and periosteum, I was struck with the fact, that all these patients were of the scrofulous diathesis.

I have for many years looked at the cases which have come under my observation in this view, and I can truly say, that, with the exception of here and there a scorbutic sailor, all those instances in which lues venerea has committed its most destructive ravages, have occurred in patients decidedly strumous. The effect that this may have on the mercurial remedies, must be decided by a more extended experience, and by more numerous observations than I have been able to bring to bear on it. But this I know, that I have the utmost horror of a simple chancre on the penis of a scrofulous man; for I have generally found, that if the patient was not worn out by the suppurations of the buboes, he would sooner or later, pass through the various gradations of constitutional lues, or fall an early victim to a consumption, hurried on by this direful aggravation.

If we turn our attention, for a moment, to the men who have been most loud in their complaints against mercury, we shall find that they have acquired their experience in warm climates, where the disease is confessedly of a milder nature than with us—that they have practised in military and other hospitals, among men whose constitutions have been depraved by excesses of every kind and who were consequently very illy able to bear the use of mercurials.

The non-mercurialist allows that the constitutional symptoms are much more liable to occur in cases where the mineral has

not been employed, and this of itself is a very formidable objection to their method.

In this, as in most other cases, the truth is not to be found at either extreme. Those who keep the middle path, will most probably make a nearer approximation to it than any others.

While the doctrines of syphilis are thus at loose ends, every medical man ought to be peculiarly observant of the cases which come under his care. For though we hear the words, syphilitic, syphiloidal, and pseudo syphilitic used by every one, how few of us could point out the one from the other; and how few of us can tell beforehand, whether mercury will cure or aggravate a venereal ulcer that may be presented to us.

A very ingenious writer, of late days, asserts, that no man deserves any credit for discovery in science; that these discoveries are the natural results of the gradual progress of improvements; that the next step in the march *must* be taken, and it is no credit to Franklin, or to Fulton, or to Jenner, or to Davy, that they have taken it. Be this as it may, it is very evident, that the next step in our knowledge of syphilis, must be a distinguishing of the forms of the disease, and the use of the appropriate remedies; and I do not hesitate to say, that, whether, justly or not, much praise will be awarded to him who can reduce the present chaos of professional opinions, into order and beauty.

ART. IV. *Observations on Typhus Icterodes.*—By ROBERT J. DODD, M. D., *of the U. S. Navy.*

THERE is, perhaps, no disease of a febrile character, which has excited more interest, or which is better calculated to create a spirit of inquiry than yellow fever. Some physicians, who have spent most of their lives in a tropical climate, and who have had ample opportunity of investigation, declare, that such was the instability, and incessantly changing character of this disease, that no one symptom would be discovered which was truly diagnostic—

while men equally high in rank, and eminent in their profession, announce, that they have found no difficulty in recognizing it or its varieties.

There is immediately before the development, and preceding an attack of this disease, a peculiar indescribable expression of the countenance, which cannot be mistaken by those who have witnessed it, and is frequently accompanied by chilliness, nausea, and extreme debility. After some hours, arterial reaction is developed, attended by an acute pain in the head, a hot skin, a general tenderness over the whole body, more especially about the epigastrium, with tension and fulness of the chest, and a dull heavy pain in the loins and hips. The eye is either engorged and glaring, or sad and watery; the tongue dried and white, with red edges; sometimes it is natural, or has the appearance of raw beef, being much elongated and flattened. There is also observed a peculiar pale-bluish, yellow or yellowish-white appearance of the skin around the ear, and on the upper part of the forehead. As the disease advances and febrile excitement is fully formed, the stomach ejects every thing that is taken, and not unfrequently a considerable quantity of bile is discharged in consequence of the continual pressure of the abdominal muscles on the liver and gall bladder. The skin is extremely hot and rough, giving to the hand when applied, a sensation so peculiar, that it is withdrawn immediately. The pulse is either full and hard, or small and tense, but not frequent. The pain in the head increases, and oftentimes delirium supervenes. The thirst is great, and respiration extremely laborious—whilst great uneasiness and anxiety prevail. Partial deafness ensues and the countenance exhibits the indescribable expression of despair, fixed and determined. These symptoms continue thirty-six, forty-eight, and often more than seventy-two hours, before a sensible abatement is distinguishable. A short time only intervenes when this remission is succeeded by symptoms of the most aggravated and appalling character. The stomach is violently contracted, and a dark fluid (in which hard flakes of the same substance are visible, mixed with ropy mucus and bile) is thrown up. Sometimes, however, no such fluid is ejected,

either alone or mixed with other matter. The thirst is vehement and respiration difficult. The skin at this stage, acquires a bluish-yellow appearance; the deafness is almost complete; the pulse becomes weak and frequent; an exudation of a dark fluid takes place, from the mouth, nose, eyes, and ears, (which differs in no essential particular, from that substance which is discharged from the stomach, and which is also found in the cava and heart after death;) hiccough and convulsions follow, and death closes the scene.

Few cases occur in which the diversity of the symptoms is not greater than what has been already described, but it is impossible to define any certain set of them as characteristic of this malady, or to state in what precise time the different changes may take place—they would only mislead and confuse. In the majority of severe cases, no remission is observable, the disease commencing and terminating in a single paroxysm. In such cases, there was observed, loss of muscular action, with a rapid growth of the hair and nails, immediately before and after death. Now this I deem to depend on the electro-animal fluid gradually escaping from that power which sustains life, and which is about to separate from physical matter. The sudden development of this fact is, I conceive, owing to its being less under the control of vitality, being eliminated by the brain and ganglia, as so many distinct electro-galvanic batteries, and going off from the body by the nerves.

Post mortem appearances. The different organs presented uniform appearances, under similar circumstances, and differing only from accidental causes. The stomach and bowels presented no traces, or very slight marks of inflammation in the congestive character of this disease; the liver was found to be of a dark color, but not in a congested state; the lungs and spleen were also of a dark aspect; the brain was apparently much altered in its structure in those cases in which great pain and delirium had existed; but no signs of inflammation or congestion were visible. The cellular texture throughout the body was of a pale bluish yellow color, similar to that acquired by the skin. Is it not probable that the various elements of the

different secretions unable to pass off, in consequence of the general derangement, have been cast, by an effort of the system, into the cellular texture? The mucous and serous membranes were quite dry. The muscular fibres possessed little tenacity.

The stomach, in the inflammatory variety, sometimes exhibited signs of extensive inflammation. In a few instances, the coats of that organ were partially destroyed. The intestines also shewed in a few cases, marks of inflammation. The liver and spleen were also distended with dark blood, but no alteration of structure was observed. The brain presented nothing unusual. The mucous membranes were very dry, while the serous were covered with a thick fluid. The cellular texture, throughout, presented the same appearance as in the other variety; as also, did the blood in the different cavities.

Besides the symptoms already enumerated, which characterize this distinction, the following are the diagnostic peculiarities of the two species. It is only by making these distinctions that we can arrive at a true knowledge of diseases; which is the more necessary, as their treatment is essentially different.

Inflammatory.	*Congestive.*
1. A peculiar suffused expression of the countenance, with a yellowish white appearance around the ear and along the upper part of the forehead.	1. A peculiar contracted expression of the countenance, with a pale bluish yellow appearance around the ear and along the upper part of the forehead.
2. The eye glaring and engorged.	2. The eye sad and watery.
3. The tongue furred, with a dark streak in the centre as natural.	3. The tongue white and dry, or like raw beef, elongated and flattened.
4. A pain over the eyes and deep in the head.	4. A pain in the parietal region of the head, occasionally shooting through the eyes.

5. The skin hot and rough, or dry and contracted.	5. The skin hot and smooth.
6. Great tenderness in the epigastric region.	6. Tenderness over the whole body.
7. Incessant vomiting.	7. Occasional vomiting.
8. Bowels obstinately constipated.	8. Bowels sometimes loose.
9. Pulse full and hard.	9. Pulse small and tense.
10. Respiration laborious.	10. Respiration moderate.
11. The countenance wearing an indescribable expression of despair, fixed and determined.	11. The countenance wearing an indescribable expression of conscious hopelesness.
12. A dark fluid is ejected from the stomach, with seeming pain and distress.	12. A dark fluid is thrown up with an expression of relief.
13. Delirium, with partial deafness.	13. Consciousness, with partial deafness.
14. Coma, hiccough, and convulsions.	14. Sensible, with a sinking of the vital powers.
15. Death.	15. Death.

In relation to the causes of yellow-fever, much difference of opinion exists among practitioners. Whilst some consider it a disease possessed of a peculiar poison, capable of being carried to different and distant parts, others, and of late the majority of the profession, have discarded the opinion of yellow-fever being a contagious disease, and suppose it to have a domestic origin. Many have attributed to marsh-miasmata the power of generating this disease; but as no one has proved their existence, and other causes can be assigned, I make no hesitation in asserting, that marsh-miasmata, possessing specific virtues in creating fevers, do not exist but in the imagination.

Excessive fatigue, night-watching, fear, mental depression, the immoderate use of ardent spirits, eating unripe fruit, or low diet with a deficiency of salted or seasoned provisions and vegetables, predispose to, and exposure to a high range of temperature, give rise to this affection.

It is evident that few cases occur among those persons who have not been exposed to the influence of a burning sun. It appears essentially necessary to the full formation of this fatal malady. The system is more easily deranged in the forenoon, than at any subsequent part of the day; at that time a greater portion of the body is acted upon by it, whereas, at noon, the sun is nearly vertical, and a large hat or umbrella, defends the person from its scorching rays; and by the time it would again throw a lengthened shadow, the body becomes less susceptible to its action. I know of no instance where the disease was communicated from one to another, nor do I believe it to be, in any way, contagious. Like all other diseases of a violent character, the excrementitious matter is very offensive, and is sufficient to excite disease, if not removed, and proper attention paid to cleanliness.

In the treatment of this malady, great attention should be paid to the state of the system. When the pulse is full and hard, the eye engorged (the vessels of the conjunctiva injected with red blood) and glaring, the pain in the head severe and deep seated, the tongue furred, the skin hot and rough, and respiration laborious, bleeding is essentially necessary, and should be resorted to, boldly, even in the advanced stage of the disease. I have taken, on the third day, when I had not seen the patient before, as much as fifty ounces of blood, before any sensible benefit was derived from the operation, and then only a slight mitigation of the pain and softness of the pulse took place, which, in a short time, was followed by more evident changes. In the abstraction of blood from the arm, two things are to be strictly observed: that the orifice be made large, to enable the blood to escape in a bold and rapid stream: that the blood be allowed to flow until an impression is made upon the system, and the blood changes to a lighter color as it escapes from the orifice. If blood is drawn, in any quantity, after this change, the advantages which might otherwise acrue to the system, are entirely lost, and the patient very much debilitated. When a less quantity is abstracted, the beneficial effects are not so great. One large bleeding is all-sufficient.

Sometimes cases occur where reaction takes place so slowly, and the depression is so great, that frequent small bleedings, from half an ounce to two ounces every hour or two, until perfect reaction had been fully developed, have been followed by the happiest results. If, however, the vessels of the conjunctiva are filled with dark blood, the eye sad and watery, the tongue white and dry, or like raw beef, the pulse at the same time small and tense, blood should not be drawn either at the commencement or any subsequent stage of the disease; nothing would tempt me to do so, if the eye and its vessels were in that condition, even though the pulse were full and hard. The blood which I have seen drawn under these circumstances, by those who have advocated blood-letting in the first twenty-four hours of the disease, without regard to the condition and state of the system, would not coagulate, possessed very little fibrin, and was deficient in saline matter. In the inflammatory variety, the blood drawn, contained less fibrin and saline matter, than when drawn under different circumstances, but more than was found in the congestive form of the disease. If great pain in the parietal region of the head existed, the natives of the middle district of Cuba, denominated it *taberdalia*, and considered the patient in a hopeless condition.

The dermoid capillaries cease to perform their usual functions, and the skin becomes extremely hot on the accession of the febrile paroxysm. When the cuticular surface was rough, or dry and contracted, I employed lime-juice, with which I sponged the whole body with the greatest possible benefit; indeed it appeared to act with specific advantage upon the capillaries, in lessening the heat, smoothing the skin, removing stricture and restoring their action. Vinegar and water also proved of considerable advantage, in the same manner, as also water applied in the form of affusion. Wetting the sheets with vinegar and water, repeating it as often as necessary, was attended by the most grateful sensations and beneficial results. I have seen cases of the most alarming nature, yield to this course of treatment.

The stomach being the great central organ by which the body is supplied, it necessarily follows, that whatever has a tendency to weaken its operations, or derange its functions, predisposes to disease. A disordered condition of its functions cannot exist any length of time, without involving other organs to a greater or less degree, though its action may be so insidious as to be scarcely noticed. Nor can any part, however remote, be affected, to any extent, without a sensible impression upon it. It is through the medium of its great and important sympathies, that we are enabled to combat the diseases incident to the human body; and when we are deprived of that medium, our efforts are truly limited. It exhibits derangement from the commencement, which increases as the disease advances. It has been supposed, by many, to be the seat of the disease, and to be uniformly in a state of inflammation. But although it may be inflamed, occasionally, as any other organ; although it may show signs of extensive disorganization, on examination after death; although all appearances may warrant the conclusion, that inflammation has existed in this as in other organs; still it does not prove, that this or that organ is the primary seat of the disease, or that inflammation in either of them is necessary to the formation of it. In numerous instances, no local signs of disease have been traced—nothing that is calculated to lead the most sanguine to conclude it to be of a symptomatic character. In irritation of the stomach, I have resorted to emetics so late as the third day, which have never failed to allay its spasmodic action almost immediately. It appears that the irritation of the stomach depends upon the derangement of its nervous action; and whatever will produce a strong impression upon that organ, is sufficient to allay the morbid excitement. The articles of that class which I used, were the ipecacuanha, sulphate of copper, and the sulphate of zinc; fifteen grains of ipecacuanha, with fifteen or twenty grains of the sulphate of zinc, or from six to ten of the sulphate of copper, was the general dose administered. After the operation of the emetic, a little arrow-root was given, which the stomach invariably retained.

Diaphoretics were likewise advantageous in the febrile stage, and their operation was much assisted by the previous action of emetics, and appropriate applications to the skin. Most of the cooling diaphoretics produced the desired effect, but I found none so decidedly salutary in this malady, as the pulvis antimonialis, given in doses of eight or ten grains, every hour. Diluent drinks were likewise very serviceable, acidulated with lime-juice.

The bowels, were invariably, in a constipated state in the inflammatory, and mostly in the congestive forms of this affection. In both kinds, relief was afforded by the same mode of treatment. Injections of sea-water, or salt and water, did more good than all the purgatives together; they were continued till the bowels were completely evacuated. There was, oftentimes, an atony of the bowels, which was so great, that not unfrequently, several quarts were injected into the intestinal canal, before any effect was produced; and then, apparently, only by the bulk and gravity of the fluid, without any action of the bowels themselves to pour it out. I have, in some cases, despaired of ever being able to accomplish any thing by this means. By perseverance, however, the dark, hard, and offensive matter which they contained, came away, and they gradually recovered their functions, to my great gratification. I have every reason to suppose, that some portion of the sea-water is absorbed. It allays the sensation of thirst effectually. In most cases the continuance of the injections have been followed with good effects. After the bowels have been freely opened, and the irritation of the stomach has subsided, purgatives may be given. Twenty grains of calomel, with ten or fifteen of jalap, or with a small quantity of some neutral salt, answered not only to affect the bowels, but likewise the liver. If the atony had been great, I gave the drastic purgatives, singly or combined with others. The following formula was one I sometimes used in such cases.

R. Aloes socot. 1-2 dr.
G. Gambogii grs. 10.
Tart. Ant. grs. iij.
Sub. Mur. Hyd. grs. xv.
Ol. Croton gtts. v.
P. G. Arabic et
Syr. simp. a a q. s.
Misce et fiat in pilulas, xx.

Of which a dose was four, or as many as circumstances required. Small doses of the neutral salts were given during the whole course of the disease, to keep the bowels in a free state.

The liver being more or less intimately associated in function with the stomach and skin, is much deranged in this malady; sometimes it is in a conjested state. There are no remedies which act alone upon the liver, but there are those that produce impressions primarily on other organs, and those which affect generally the glandular system. It is not essentially necessary that this organ be wholly relieved before a crisis takes place; yet it is important, that total relief be afforded as soon as possible, that the treatment subsequently may be simple, and restoration to health speedy. The muriatic, and nitro-muriatic acids were useful in removing obstructions. The application of cups and blisters to the sides proved beneficial.

The brain and nerves constitute the grand chain of connection between all parts of the system, and besides performing an independent function, they are intimately blended with the functions of every other part. When one of them is in a state of lesion, the brain is secondarily affected, and will tend to keep up the disease first induced, leading us often times to suppose that it was primarily impressed. In the congestive form of this disease, when the pain in the head was severe, the application of cold water, or vinegar and water, and in the inflammatory variety, that of cups, leeches, and blisters, gave relief to the scalp. From the application of blisters, I have never known any advantage; they have only created pain and uneasiness.

When the pain began to abate, and the pulse began to soften, the sulphate of quinine or sulphate of cornine was administered in large doses, usually in conjunction with powdered cinnamon or ginger. If the remission did not take place in less than forty-eight or seventy-two hours, and had not been brought about by previous treatment, from twenty to thirty grains were given every twenty minutes or half an hour, until a hundred or a hundred and fifty grains had been taken, then a less quantity at longer intervals. On the contrary, if the remission took place in twelve or twenty-four hours, and had been produced by active treatment, from fifteen to twenty grains administered every hour, until eighty or a hundred grains had been taken, was all that was required. Bark in substance, or some other tonic was employed as soon as the fever was broken, and continued till health was perfectly restored. The cornine, in small doses, was preferable, in some cases to the bark. When either of these remedies was given in large doses, the other, or some astringent tonic followed in small doses, because a small dose of a medicine which had been administered in large doses, was not efficacious, whereas, another produced all that was expected. In some cases of the congestive form, the mineral tonics, particularly the iron, were more beneficial than the bark. The tonic remedies were administered after the first exacerbation, and in no instance as yet have I witnessed their failure.

In connection with the medicinal treatment, attention was also paid to articles of diet. I have always found it better to supply the stomach regularly with a quantity of food of a proper kind, sufficient to keep it in action, thereby assisting the operation of medicine, and preventing unpleasant symptoms. Arrow-root, tapioca, sago, &c., were very grateful to the stomach, and of these, the arrow-root was decidedly preferable. Barley-water, flax-seed tea, rice water, &c., were used as diluent drinks.. Such articles as contained a considerable quantity of nourishment, and were palatable, were preferred during convalescence, given in moderate quantities, at stated periods. After the patients recovered a little strength, much good was derived from sea-bathing and the exercise of riding, taking

care not to be exposed to the sun, night dews, or morning fogs. The bowels were kept open by small doses of the neutral salts. The patients lived principally on the meat of young animals and vegetables, avoiding the use of beef as much as possible. It is a singular fact, that all parts of the bullock which lie within an inch from the surface, are unfit for use, being hard and tough.

A few cases are subjoined, the history of which was taken at the time, with an account of the mode of treatment.

J. L., a cooper from the United States, had been in the West-Indies about twenty days, had been cautioned not to expose himself either to the sun or night dews, but paid no attention to the friendly advice given him, until he perceived his strength was not sufficient for him to continue his ordinary avocation. Late in the evening, 24th June, complained of being cold and chilly—told his landlady his head ached, and desired medicine—took some oil and retired to bed—began to vomit—became feverish—looked wild, and talked very incoherently—was very restless during the night, and breathed unusually hard. In the morning, 24th—continued vomiting—was delirious—spoke of suffering from pain in the head and stomach—had much fever, and his skin was hot and rough—was extremely thirsty—eyes engorged with red blood and protruding—tongue very much furred and thickened, of a brown color, and had a dark streak in the centre—bowels had not been open for more than three days—pulse full and hard, resembling the turning of a large cord under the fingers—breathing performed with signs of oppression—face suffused, and wore a peculiar expression, with an unusual appearance of the skin on the forehead and around the ear—had passed but a small quantity of urine, which was of a high color, and deposited a large quantity of red matter on standing a few minutes—pain in the loins and thighs excruciating.

A vein in his arm was immediately opened, and sixty ounces of blood drawn before any change was observed in the pulse, or in the blood, when it was thought advisable to bandage the arm—was then washed with lime juice, and as the vomiting

continued, an emetic was administered, consisting of fifteen grains of ipecacuanha and twenty of the sulphate of copper, which operated almost instantaneously—bowels were then evacuated by means of cold sea-water injections, and which were continued till the larger intestines were supposed to contain very little fecal matter—pulse became softer—pain in the head less severe—respiration more free—skin not so hot or rough—eyes more moveable—the vessels less engorged—irritation of the stomach wholly removed, and the patient generally much improved—cups applied to the temples and sinapisms laid on the calves of the legs and soles of the feet—a dose of calomel and jalap administered—sheets wet with vinegar, and water and to be repeated when they became dry—gave a little thin arrow root—eight grains of the pulvis antimonialis to be taken every hour—was allowed to drink rice-water—towards evening, the symptoms gradually abated, the injections having been administered every two hours—signs of remission shewed themselves on the 25th, at night—twenty grains of quinine, mixed with some powdered cinnamon were given every half hour, for three hours, and ten grains every hour for six hours—then altogether omitted. Proper nourishment, small doses of cornine, and the bark in substance completed the cure.

J. F., a girl fourteen years of age, native of the West Indies, had been on the beach searching for shells, in the middle of the day, 24th June, exposed to the hot sun. On her return home, she complained of a headach, and went to bed, in the evening, had considerable fever, pulse small and tense—head very painful—eyes sad and watery—face pale, and countenance exhibiting an expression of great anxiety and distress—spoke wildly, and was somewhat delirious—tongue white and furred—vomited a great quantity of watery fluid, tinged with bile—much debility existed—sharp pain in her head, over her ear, sometimes in the eye of the same side, and in the back—started when pressure was made on the abdomen—skin hot and sore to the touch—bowels had been loose the preceding day—respired freely, but felt somewhat oppressed—gave her an emetic of Ipecacuanha and sulphate of copper, twelve grains of the for-

mer with eight of the latter—salt-water injections administered, and directed to be continued every two hours—took a dose of calomel and jalap—sinapisms applied to the wrists and ankles—towels wrung out of cold water, placed about the head, to be removed as often as necessary—during the night, drank water, in which tartarized antimony was dissolved. In the morning, 25th, was somewhat relieved—remedies continued. In the evening, a remission took place—six grains of quinine were ordered to be taken every hour, until morning—26th—was entirely free from fever—quinine was omitted, and small doses of the precipitated carbonate of iron substituted in its place—with a free diet and gentle exercise, recovered in a few days.

Mr. P. had been in a tropical climate several months. 2d July, was on horseback several hours, exposed to the sun, in the morning, without eating breakfast—was seized with pain in the head and chilliness—complained of weakness of the stomach and vomiting, which were succeeded by flashings over the face—much pain in the back and loins, soreness of the abdomen, pain in the side—soon after, fever took place—eyes became engorged with red blood and glaring—tongue dry and red along the edges—had a peculiar expression of the countenance when spoken to—suffered from a pain shooting into the eyes—pulse quick and full—skin dry and hot—bowels constipated—respiration laborious, with great oppression. Thirty-five ounces of blood were taken, when the pulse became softer—respiration more free—bowels were opened by injections of salt-water. An emetic, consisting of fifteen grains of ipecacuanha and four of sulphate of zinc was given, and afforded immediate relief from those symptoms arising from a disordered stomach. Affusions of cold water and diluent drinks brought about an abatement of the symptoms. The sulphate of quinine was directed to be used in doses of ten grains every hour, for eight hours. The subsequent use of Colombo, gentian, and quassia, with proper diet restored him to health.

A. S., a young lady, native of the United States, had resided in the Island of Cuba more than two years. 2d of July, in the evening, was seized with fever. On the morning of the 3d,

complained of a severe pain in the head and soreness of the whole body; eyes were sad and watery, and unable to bear the light; tongue white and dry, skin hot and smooth; countenance bore a peculiar expression; the skin along the upper part of the forehead and around the ear, appeared of a paler color; bowels constipated. There was slight nausea, but no vomiting; gave her a dose of calomel and jalap, and directed injections of warm water, to which were added oil and table-salt. Sinapisms were applied to the feet; the pulvis antimonialis, in doses of six grains, was given every hour, with diluent drinks; occasionally a spoonful of arrow-root was taken. On the morning of the 4th, a remission took place. The quinine was administered in doses of ten grains, with cinnamon, every hour, for three hours, then six grains for several hours. A decoction of serpintaria was ordered, and food of the most nourishing kind, taken, prepared in a palatable manner. Gentle exercise in a volante, and bathing, were recommended. In a short time she regained her strength and spirits.

J. G., a fisherman, native of Cuba, was in the habit of assisting in work on board of vessels, whenever an opportunity occurred, during which time he received a daily allowance of spirits. Having been at work several days, was attacked, on the 25th of September, with pain in the head and fever, while exposed to the influence of the sun, on the ship's deck; was carried on shore, and immediately made application for relief; pulse full and strong; eyes glaring, and the vessels engorged with red blood; tongue dry, white, and furred, with yellow edges and a brown streak in the centre, sharp at the point and broad at the base; has a peculiar indescribable expression of the countenance, with a whitish-yellow appearance of the skin on the forehead and around the ear; complained of a tightness of the chest and a difficulty in breathing, soreness of the abdomen, and a deep, heavy pain, in the back and head; bowels were constipated; had not passed urine, in any quantity, since yesterday; skin dry and hot; pain through the chest, neck, and head, almost insupportable. Blood was immediately drawn from the arm; the body sponged with vinegar; bowels opened by

the use of sea-water injections; cold water was dashed on the patient several times, with decided benefit. Ten grains of the pulvis antimonialis were given every hour, and the injections repeated; drank nothing but cold water, acidulated with a little vinegar. Bruized onions and garlic were applied to the feet, and a blister to the nape of the neck. In fourteen hours, an abatement took place; fifteen grains of the sulphate of cornine, with as much powdered ginger, were given every hour, for six hours; then, by the use of small doses of the sulphate of quinine and the serpentaria, the cure was effected.

W. S., a carpenter and cooper, had been in the West Indies upwards of six weeks; drank freely of spirituous liquors, and worked hard; was very fond of fruit, and eat little else; was taken down with fever, 28th of September, and sent for a physician. On the 1st of October, in the evening, I saw him, in consultation with the medical attendant, a native of that place, who made no hesitation in declaring that he could not live twelve hours; was speechless; tongue swelled and thrust out of the mouth; ejected a dark fluid from the stomach; vessels of the eyes engorged with dark blood; pulse full and slow; cathartic medicines that were taken, had not operated; hands were every now and then pressed against the side of the head; the nurse stated he spoke about the pain in his head being very great the day previous; skin was exceedingly hot, rough, and so contracted, as to resemble dried leather; bowels had not been open from the commencement of the disease; countenance had an expression truly distressing, expressive of a state of sullen despair; skin of a pale bluish-yellow on the forehead. An emetic was given, and his mouth washed with pine-apple juice. The body was bathed with lime-juice, and the sheets wet with vinegar and water. Cups were put on the temples, and bruised onions, with mustard, applied to the feet. The following cathartic was then administered:

R. Aloes grs. vi.
G. Gambog gr. i.
Calomel grs. x.
Ol. Croton gtts. ij.
P. G. Arabic, q. s.
m. et ft. in pilulas.

When the bowels were opened, the pulvis antimonialis, in small doses, every half hour, with diluent drinks, was given, as soon as circumstances permitted. In the morning of the 2d July, had improved wonderfully; could understand what was said to him, and reply, by motions with his head; skin was quite yellow, but not so rough as yesterday; medicines and injections continued. At 12 o'clock, the symptoms had so far abated, as to admit the use of the quinine, of which twenty grains were administered every twenty minutes, for two hours. Afterwards, the bark, every hour, with a generous diet and moderate exercise, soon enabled the patient to attend to his ordinary occupation.

J. N., a cigar manufacturer, native of the West Indies; could receive no information concerning the causes, or in what way the disease made its appearance. On the first of October, found him laboring under a violent fever; pulse full, but not hard; eyes watery, the cornea flattened and irregular; face much suffused, with an appearance of the skin wholly different from any I had before witnessed; it appeared yellow, spread over with bluish white spots, about the size of a shilling; horror and dismay were depicted in the countenance; tongue much swollen, and hung out of the mouth, covered with a black crust a quarter of an inch thick, and quite hard; vomiting continually a dark substance, which resembled clotted blood mixed with bile; was insensible to all that passed, and several times applied his hands to his head, indicative of suffering. The expressed juice of a ripe pine-apple, was given in tea-spoonfuls, which allayed the vomiting in a few minutes. Sea-water injections were used without success. An injection was then administered, consisting of two ounces of castor oil, and four of

the spirits of turpentine, mixed with a quart of warm water, which produced a copious tar-like evacuation. The salt water was then continued, with evident benefit at stated periods. The skin was washed with lime-juice, and afterwards with vinegar. Cups were applied to the temples, and blisters to the neck. Little alteration took place for several hours. A strong infusion of capsicum and vinegar was rubbed on the extremities. A dose of croton oil produced a number of stools; became sensible of relief, and endeavored to speak. It was thought advisable to wash his mouth with lime-juice, and remove the crust from the tongue; took warm diluent drinks with eagerness, and gradually acquired the power of speech; signs of remission showed themselves, and the quinine administered in doses of twenty-five grains every half-hour, for four hours; subsequently, the bark and iron were alternately administered, until medicine was no longer required. Proper diet, sea-bathing, and gentle exercise, restored him to health in a few days.

S. R., a laundress, forty-five years of age. They stated that she had been washing, on the 22d of October, at the river, in the sun, and had been wet by a shower of rain, but did not change her clothes till evening; that she then felt unusually weak and feeble, and experienced a sensation of heaviness in the head; that she went to bed, and rested badly during the night, and the following morning was attacked with fever; that she had taken several doses of medicine, without being affected by them. On the 25th, fever continued violent; pulse full, hard, and strong; vessels of the eyes engorged with red blood, the cornea appearing unusually convex; skin on the forehead of a pale yellowish color; tongue thick and furred, with a black crust upon it; voice inarticulate; teeth encrusted; respiration painful and laborious; was vomiting, incessantly, a dark fluid, resembling coffee-grounds; skin hot, rough, and unpleasant to touch; bowels had remained obstinately constipated, for the last four or five days; pain in the head excruciating, as also was the pain in the loins and legs distressing; abdomen could not be pressed upon, without producing unpleasant symptoms; urine had been passed in small quantities, and of a high color; had

not slept since the commencement of the disease; cannot comprehend what is said, unless spoken to in a very loud tone, and is constantly endeavoring to get up.

Blood was drawn to the amount of forty or fifty ounces, an emetic given, and the body bathed with fresh lime-juice. Blisters were applied to the nape of the neck and breast, and sinapisms to the feet; injections of sea-water were administered repeatedly, during the day, which gave great relief. The pulvis antimonialis ordered every hour, and rice-water to be drank freely. In the evening, the violent symptoms began to abate; the blisters were dressed, and sinapisms omitted. Thirty grains of quinine were then given every half hour, for three hours, and the bark, with wine, continued, until the patient was out of danger.

W., a physician from the United States; had been in the West-Indies only a few days; eat a considerable quantity of fruit; paid no attention to the admonitions of his friends. 23d of October, was attacked with fever; pulse small and soft; eyes engorged with dark blood, and glaring; felt a severe pain in the side of his head; bowels had not been open for two or three days; countenance pale and contracted; tongue dry and furred; skin dry, and somewhat rough; respired with considerable difficulty, and complained of great soreness about the chest and arms. Gave him a dose of calomel and aloes, which produced several copious evacuations; was directed to drink freely of rice-water, and take eight grains of the pulvis antimonialis every hour. In the evening of the 24th, a remission took place, and the sulphate of quinine, in doses of fifteen grains every hour, for four hours, and four grains for six hours, were all that was required, with moderate diet and gentle exercise, to complete the cure. Small doses of neutral salts were taken, as occasion required.

There is nothing so well calculated to prevent sickness on board of vessels, as cleanliness. The practice of washing decks every morning, when the weather will admit of it, is attended with personal benefit, as well as calculated to cleanse and preserve the vessel and what appertains to her. Each individ-

ual of the watch, pulls off his shoes and stockings, (or should do so,) and rolls up his trowers, before he commences. The custom of washing the feet, is not of modern adoption; and that of washing the face and hands, is practically acknowledged, by all, to be of great utility. I recommended bathing, in port, at least once in twenty-four hours; when at sea, to strip and dash water on each other, in the morning, before washing decks, or in the evening. The men became extremely fond of indulging in so salutary a practice. A number, who wore their shoes and stockings when wet, from indolence or necessity, were afflicted with diarrheas, rheumatism, catarrhs, &c. The wearing of flannel contributes greatly to the health of the crew, as also did the domestic cotton, manufactured with a nap on one side, which was worn next to the skin, which I believe is preferable to flannel. No clothes that were wet, should ever be allowed to be put away in that state. In the evening, they wore jackets of cloth, and were directed to keep them on during the night. Changing clothes twice a week, and as often as they became wet, tended to prevent unpleasant consequences. Much depends upon the disposition of commanders, in consulting with surgeons, on the means to be used in preserving the health of the men. Unless such a disposition is shown, the efforts of surgeons are defeated, large sick-lists present themselves, and the crews are generally feeble and depressed. Good water greatly assists in the preservative of health, and much care should be taken to attain it. That which is procured from rivers, will keep longer and better than that obtained from springs, and seldom contains so large a quantity of vegetable matter. The casks should be well cleansed, and the bungs allowed to remain out some days. In the West Indies, when the weather is extremely sultry, the consumption of water is necessarily greater, and the very mention of an allowance, causes such an excitement, that twice the quantity of water is drank, and thirst unallayed.

I have observed, when the water has been placed in the scuttle-butt, regularly, without naming an allowance, and refilled as often as required, the consumption has not been more than one

gallon per man, a day, in the warmest weather, and seldom more than three quarts; a less quantity will hardly suffice. Music is well calculated to cheer the mind and enliven the spirits. It is really gratifying, to see the sturdy mariner, who has toiled all day, shake off his weariness and strike nimbly his foot to the sound of the violin.

Supplies of fresh provisions, while in port, add much to the preservation of health, but every other day is sufficiently often, while on the intermediate days the crew should receive their regular allowance of salted provisions. The bowels of sea-faring men, generally, have a tendency to be constipated, except after the use of fresh provisions. I have had as many as twenty, on the list of fevers and diarrhea, in two days, when they have been at work, exposed to the sun, on shore, and supplied with fresh provisions; but from proper treatment, were returned to duty in as short a time.

To prevent the formation of bilge water, and keep the ship clean, water was let in twice a day, in sufficient quantities to mix with that already in the vessel, which could not be removed, by the pumps, owing to the formation of that part of the vessel, and pumped off again. Many merchant vessels are possessed of no means to let water into them, and consequently the action of the water on the wood, creates an offensive odour, which in rough weather cannot be endured for any length of time without creating sickness. This would not be the case if the water was frequently changed. Some entertain an idea that no water should be admitted, as if it had a tendency to make a vessel unhealthy. Having had upwards of two years' experience in that particular, in a tropical climate, the cleanliness of the vessel, and healthiness of the crew, warrant me to say, that no bad effects attended the practice. In large vessels, the lower decks are more frequently rubbed with dry holly stones, with a view to cleanse them without the use of water; but it will occur to every impartial one, that such a practice is attended with injurious consequences, and defeats the very object for which it was intended. In the first place it is injurious, by constantly wearing away the decks, and the tops of mess chests; secondly,

by reducing the sand to very small particles, the men at work necessarily inhale more or less of it, which produces unpleasant symptoms. A number of men were attacked with pain in the chest, cough, and expectoration of pus; the cause of which I would attribute to nothing but a change of weather and the inhalation of this dust. The washing of the lower decks in the morning, at least once a week, and drying them by means of stoves, hot shot, and heated sand, is attended with less injurious effects. Sprinkling of sand on the floor in the evening, will be sufficient to protect the deck during the night. Sprinkling with the chloride of lime, mixed with water, before washing the decks, and permitting it to dry, cleanses and whitens them. It also purifies the air, and renders the vessel wholsome. The chlorine being one of the electro-negative substances, combines like them, with most other substances, and in that manner renders the obnoxious vapours and gases nugatory; but its constant use and disengagement, in large quantities, is extremely injurious. It has been supposed capable of preventing yellow fever; but I am constrained to say, my experience and observations do not establish such a conclusion. Vessels, on board of which it has been regularly and constantly employed, were not more healthy, nor as much so, as those in which it was seldom used. If it was capable of preventing yellow fever, I should suppose it would likewise have prevented other fevers. On board of one of our public vessels, the surgeon officially informed me that upwards of forty cases of bilious fever had occurred, yet he persevered in its use, and deemed it sufficiently powerful to prevent yellow fever. That malady shewed itself on board of vessels where it was applied continually, and in one which appeared perfectly sweet and clean, which renders it more apparent, that it does not arise from any thing peculiar to the vessel. Hence, the evidence in favor of the chloride of lime being an article of value in rendering an impure atmosphere respirable and wholsome, but by no means sufficient to prevent yellow fever.

ART. V. *Extirpation of a Sarcomatous Testicle.*—By Dr. DANIEL L. SANDERS, of Perrysville, Ten., communicated in a letter to Dr. Drake.

WHEN I first performed this operation, (in the month of April, 30,) I was not impressed with the importance of reporting it, and therefore neglected it, until induced to do so by repeated solicitations from several medical gentlemen, who seemed to regard its publication, with a greater degree of interest.

The subject of the operation was a mulato man (Sam) aged forty-five years. The history which he gave me of his affliction, may be condensed into the following narrative:

About five years ago, he informed me, he discovered the first approach of this alarming enlargement of his testicle, under the form of a hydrocele; for about four or five months, its growth was rapidly progressive; at the expiration of which time the hydrocele was punctured, and the fluid evacuated. The coats of the scrotum were, however, shortly distended again by a deposition of the same fluid, which was again evacuated; and thus repeated many times. At length, the injection of some stimulating fluid was resolved on for the purpose of obliterating the cavity. Shortly after the injection of this fluid, my patient relates, the growth of the testicle commenced, which progressed gradually to such an enormous size, as to be greatly inconvenient to the patient. The operation was performed in the following manner:

The patient having been previously secured, after the manner usually practised in the operation of lithotomy, an incision was made, three inches in length, through the tunica albuginea, and tunica vaginolis, into the substance of the testicle. On examination, I found the coats completely coalesced, and finally attached to the testicle. They were also much indurated, and covered with blood vessels of an enormous magnitude; which, besides adding greatly to the already prodigious mass, much embarrassed the operation. The coats of the testicle were, however, slowly dissected from the testicle, while the larger

vessels were secured by ligatures, as the hemorrhage seemed to demand, until the whole of the testicle was denuded up to the spermatic chord. Then carefully separating the vasdeperens, the cord was penetrated by a needle, armed with a double ligature, and securely tied, while the excision of the bulky mass completed the operation. The patient was put upon the course, usually resorted to in the treatment of wounds; and he remains, at this time, (twelve months from the time of the operation,) in good health.

Upon examination, the internal glandular structure of the testicle, seemed to be entirely wanting, or converted into a watery fluid, which, in form of a cyst, occupied the centre, while the cyst was enveloped by a sarcomatous mass, interspersed with scurbus indurations.

The testicle measured eight inches in length, and five in diameter, and weighed four pounds.

D. L. SAUNDERS.

DANIEL DRAKE, M. D.

Memphis, Tennessee, 20th May, 1831.

ART. VI. *The History of Lithotomy.*—By JAMES M. STAUGHTON, M. D., Professor of Surgery in Miami University.

THE subject of Lithotomy is interesting to every Medical practitioner, and in this view I have no apology to offer to the readers of the Western Medical Journal for the sketch of the various operations which I am about to offer.

In the early ages of the world, surgery was left by the ignorant pride of the physicians to the superintendance of illiterate men, frequently to slaves, or to persons whom the father of Medicine denominates *mercenaries*, day-laborers. These men always operated, in all cases that were presented to them, with that boldness which is ever the associate of the most profound ignorance. In many cases they are said to have succeeded, but their modes of operation are to us entirely unknown;

Physicians, to the dishonor of the profession, neglected this important province of the Healing Art, and seemed willing to commit every thing surgical to an abyss from which there should be no resurrection.

The history of the operation for Lithotomy, is shrouded in so thick a veil of antiquity, that though its existence is ascertained, the peculiarities of its form are not traceable. The first record that we have of this most distressing affliction, is found in the celebrated oath of Hippocrates, in which he makes his pupils swear "by Apollo Medicus, by Esculapius, and by Panace, and calls all the gods and goddesses to the oath, that they will never cut any one for the stone, but leave the operation to the surgeons."

The next author, in point of time, to whom we must refer is Celsus. He mentions a certain Ammomius as the most ancient lithotomist, and describes a kind of scoop and another instrument which he employed when operating. Meges is mentioned as a successor of Ammomius. He is said to have brought his instruments to a state of very considerable improvement. It is certain that Ammomius and Sostrates also, endeavored to break the calculus in pieces while yet in the bladder, and then to extract the fragments. Florus, the animated Latin historian, states that the son of Alexander, monarch of Syria, perished under the operation of lithotomy. The usurper of his father's kingdom pretended that he labored under calculus, and contrived his death during the pangs of incision. From this solitary fact, the state of surgery and the dissolute character of surgeons at that period may be readily inferred. It is a fact, that, as we sometimes say, speaks volumes.

Celsian Operation.—The first operation in lithotomy that we find distinctly described, is in the works of Celsus. The operation was probably performed long before the time before he flourished, but here we have the first distinctive exhibition. It has been called *Lithotomia Celsiana* and *Methodus Celsiana*, by a variety of authors, not because invented or performed by this celebrated writer, but because he was the first who described it.

About the commencement of the 16th century, the operation was called the APPARATUS MINOR, a name by which it is pretty generally known, and which distinguishes it from another mode, which was denominated apparatus major. Another name has been employed, more appropriate than elegant, called "THE CUTTING ON THE GRIPE," from the peculiar manner in which the stone was seized previous to the incision.

It was the opinion of the older surgeons, that a wound in the bladder itself was infinitely more dangerous than one in the neck of that viscus. Hence, it became an important object with them to extract the stone solely through an aperture produced in the neck. It is not to our present purpose to shew how completely they were mistaken. The patient was placed on the table, very nearly in the same position in which we place him now. The legs were secured by two assistants. The fore and middle fingers of the left hand of the surgeon, previously dipped in oil, were introduced into the anus; the right hand rested on the abdomen, just over the symphysis of the pubes. With the fingers of the left hand, attempts were made to draw the calculus down to the neck of the bladder and by these means to produce a tumour in the perineum, by which the incision was to be guided. But the appearance of this tumour afforded very uncertain direction. In none but in cases of very small calculi could it be produced. As soon as the tumour appeared, or in other words, when the calculus was supposed to be fairly lodged in the neck of the bladder, the incision was to be made. Celsus directs that it be made above the anus, of a semicircular form, and that the *extremities* of it should be below. The stone was then dislodged by the fingers in the rectum, or if it were too large, an instrument resembling the common obstetric crotchet was used to facilitate its exit. What I have described is the celebrated Celsian mode, a mode devised and practised in the infancy of Anatomy, yet one which exhibits some elemental knowledge in relation to the parts to which an operation in lithotomy has immediate relation.

For example, the semi-lunar cut was evidently intended to avoid wounding the rectum,

But there are many and very serious objections to this Celsian course. The operation when thus performed, must have occurred without that anatomical precision, with which it ought ever to be attended. In almost every case, the parts in which incisions are intended to be made, materially vary, corresponding with the magnitude of the stone, the force employed to keep it opposite to the perineum, and its precise situation as regards the bladder. The urethra may entirely be cut away from the prostate. The vesiculæ seminales, the vasa deferentia, or even the ureters themselves may be seriously injured.

According to Celsus himself, the neck of the bladder has been so much injured from the pressure of a rough calculus upon it, that patients have been destroyed from this cause alone. But the most formidable objection remains to be exhibited. The extreme difficulty of reaching the stone in adults, and of fixing it in an apposite situation for extraction was well known to the ancient, and, under this serious impression, Celsus permitted the operation to be performed only on patients between 10 and 14 years of age.

We have presented you undoubtedly with the most interesting of operations for one of the most deplorable of maladies; interesting as one of the first and finest efforts of chirurgic skill, interesting from its simplicity, and interesting because of the success which attended its performance. I consider it as an operation performed by some happy and adventurous hand, in the rude, primeval ages, without a parallel. We contemplate it with enthusiastic admiration, and wonder that a first attempt should have approximated so near to perfection. In relation to children, this simple mode of operating far from being disdained, has been advised by surgeons of the present day.

Celsus is the only writer who expounds the process with any thing like precision, and his successors have touched the subject only with a trembling hand. What they have written is remarkable only for its obscurity. Galen, though he writes expressly on the stone, and prescribes remedies, almost innumera-

ble, calculated to dissolve it in the bladder, utters not a word relative to an operation.

Antylus, Paul of Ægena, and the celebrated Phylagreus, while they have thrown great light on the state of other branches of medical science, in the days in which they lived, have contributed nothing to the boundaries of our knowledge of Lithotomy.

From the point we have assumed, let us descend to that period when the Arabians, enriched with the spoils of European learning, transplanted the arts from their native soil to Asiatic shores. And what shall we find here? Among them Surgery never flourished. An appalling horror at the idea of operation paralysed the hand which held the surgical knife. Prejudices both of a civil and religious character fettered their genius, and restrained its daring aspirations. Life was trifled away with the ointment, the balsam, or the talisman, where the bistoury or the scalpel offered the only chance of salvation. In the hands of men thus tenacious of blood, lithotomy, as might be expected, could make no advances. Content with what Celsus had written, no effort at improvement was attempted. The infallibility of Celsus was acknowledged by the Arabians, as firmly and satisfactorily as by the Romans themselves. It is surprising, yet true, that Albucasis, the Hunter in Arabic Surgery, has left no indication of improvement on the Celsian mode, in even a solitary particular. On the contrary, the only alteration he ventured to make on the system of his great master's method, tends simply to show his want of firmness. This frightened operator, if during the course, hemorrhage occurred, would immediately apply green vitriol, and with a wisdom, at which modern surgery cannot forbear smiling, wait until the hemmorhage had subsided. To the Arabian, the lithotomist owes nothing, but gratitude, for their having preserved to us the illustrious records of Celsus.

High Operation.—The simple cutting on the gripe maintained its character, and was the only operation known for the calculus, until the commencement of the 16th century. Peter Franco, a celebrated surgeon of Lausanne, about this period

had the honor of devising and of executing a new mode. The account which he has given of the circumstances which led him to this new idea, is so natural, that I shall content myself with translating his own words, from the antiquated French of his day. "I will mention," says he, "what once happened to me when desirous of extracting a stone from a child two years of age or thereabout. In this case I found the stone as near as might be to the size of a hen's egg. I did all that it was possible for me, to draw it out, but found I could not move it with all my efforts. The patient was extremely tormented, and the relations were desirous that the child should die, rather than remain in such unutterable affliction. To my shame be it spoken, I also was not willing to be reproached with not knowing how to extract the stone. With the consent of the father, mother, and friends, I determined to cut the child above the pubis. I made an incision above the penis, holding the stone with my fingers in the rectum, and having the abdomen compressed by an assistant. In this way I succeeded. The patient was cured (but not without severe indisposition) and the wound perfectly healed."

The distinguished lithotomist who thus communicated to the world the first conception of the high operation, was deeply tinctured with the prejudice which had been transmitted to himself and his cotemporaries from the writers of antiquity, that wounds in the body of the bladder were necessarily fatal. Notwithstanding his boldness in the preceding case was crowned with the most abundant success, his strong apprehensions as to wounds of this nature, prevented him from recommending the high operation to his followers. Another idea concerning the stone is to be found in the work of Franco, which deserves to be recorded, since within a very few years a distinguished surgeon in London has applied it to the most successful practice. In the case of females afflicted with the stone, he declines the use of the knife, confining himself to the employment of a peculiar instrument for dilating the urethra, and then extracting the stone with forceps.

In 1580, Francis Rousset alleged the success of Franco, as a ground for venturing to assert that the operation above the pubis might be performed without subjecting the patient to any greater risk than he would be exposed to, in the common mode of operating. Though Rousset never attempted the operation, he determined in a masterly manner the process by which it ought to be performed. As the high operation has been attempted after the instructions of Rousset, and in no other way until the appearance of Frere Come, a slight outline of it in this place, may not prove uninteresting.

Having distended the bladder in a great degree, either by injections of barley-water, or by the retained evacuation, the patient was laid upon a table with his hips a little raised. An incision was then made from the symphysis pubis towards the umbilicus, of the breadth of three or four fingers in extent, between the recti and pyrimidales muscles. The bladder being in this way exposed, a spear-pointed bistoury was plunged through its anterior walls, as near as possible to the cervix. This opening was to be small, to prevent the too sudden escape of urine, and to allow a probe-pointed knife to be introduced, by which the incision was to be enlarged, but not to be greater than should be found absolutely necessary for the introduction of the forceps. The forefinger of the left hand, then being pushed into the rectum, the stone was so raised that it could easily be picked out with the fingers, or by means of a small pair of forceps. The lips of the wound were then to be completely closed and healed as rapidly as possible.

Such was the operation of Rousset—an operation in which all chances of failure or accident were carefully provided against. But the dogmas of the ancients were not to be relinquished by the operators of that day, consequently the high operation fell into oblivion, until resuscitated by John Douglass, who, in 1719, placed it in the ranks of regular and established surgery.

His method so closely resembles that of Rousset, that a particular description of it is unnecessary. He demonstrated its excellency by experiment, as his brother, James Douglass, had

previously shown by repeated anatomical examinations, that it was perfectly feasible. Out of fifteen patients who were cut by this method in Westminster and St. Thomas Hospitals, in London, all, with the exception of two, were perfectly restored. Yet, while the efficacy of Douglass's mode was, by surgeons, generally admitted and regarded in a light the most favorable, the unbounded success of Cheselden so attracted their attention, that the operation above the pubis became, in a good degree, disregarded.

After this, an ecclesiastic, commonly known under the name of Frere Come, attempted to revive this operation under a modified form, in France.

This operation soon fell into neglect. It has since been brought up again, by an irregular lithotomist of Paris, named Souberbielle, who claims some kind of a descent from Frere Come. In this operation a catheter is introduced into the bladder; the first incision of the lateral operation is made and carried down to the catheter in the membranous portion of the urethra; on the catheter is introduced into the distended bladder, a spear-pointed sound, the point of which is pushed from the bladder through the muscles and integument just above the pubis. This opening is then enlarged, and the stone extracted.

The first incision enables the urine to drip away at the most depending part. In the year 1823, the writer saw Souberbielle, in Paris and in London, where his operations were eminently successful. But they were frowned on by the regular surgeons.

In London, Souberbielle operated on several of Sir Astley Cooper's patients, with very marked success.

Apparatus Major.—The high operation not coming into use, the Celsian mode continued to be employed. The lithotomists of this period were men ignorant and avaricious; abhorred and rejected by the practitioners of medicine.

The latter, however finding that the operators had a highly lucrative branch of the profession under their care, attempted to divert it into their own hands. The Celsian mode now in use, was simple, and required nothing but intrepidity to ensure

success. To invent an operation more complicated in its nature, and requiring more dexterity in its performance, and then to induce the world to believe that it was infinitely superior to the popular practice, became an object of invention and ambition. In this way they promised to secure to themselves those pecuniary rewards of which the lithotomists were reaping such an abundant harvest, and to suppress them beneath a mass of learned jargon and incomprehensible absurdities.

Johannes de Romanis, a surgeon of Cremona, in Italy, has merited the honor of having encumbered our science with that mode of extracting the stone, called the Great Apparatus. This projector, though he acquired while living, a degree of reputation which few men attain, has left no description of his invention. Mariano Santo de Barletta, a Neapolitan by birth, a disciple of Romanis, wrote extensively on the merits of his master. As his account of the Great Apparatus was the first given to the world, his name has been applied to it. It is called the Marian mode; just as the name of Americus is given to the continent of Columbus.

The Marian operation was called the *Apparatus Major*, on account of the number of instruments necessary for its performance, in distinction from the Celsian *Apparatus Minor*, where only a knife and a hook were required. A passage was to be selected from Hippocrates, on which this operation was to be considered as founded: for without some high authority, no practitioner would dare to hazard an innovation. An aphorism was therefore selected from the writings of this father of medicine, which long experience had decided to be false, but which, as it favored the ideas of Mariano, was supported with as much intemperate fervour, as though it were impossible for Hippocrates to have erred. The celebrated selection is "*vesica decissa, aut cerebro, aut corde est lethale*," wounds of the bladder, of the brain, or of the heart, are mortal. This I say was known to be false, since in the apparatus minor, and in the high operation, the bladder had always been cut, and frequently been cured.

Let us attend for a moment to the process by which this operation was performed. The patient was placed on a table, and two strong bands of cloth, three yards long, joined in the middle, were placed behind the neck, two ends were brought over the shoulder and two under the armpits, when all four were laced across the thorax. The thighs were thin, violently flexed on the pelvis, and the legs on the thighs; the patient was then requested to grasp the soles of his feet with either hand. The straps were now brought down from the thorax under the thighs, and the patient lashed hand and foot together. Two assistants were employed to hold the legs, while a third was victoriously mounted on the table, behind the victim, to secure him the more effectually by holding him down. Nor was this precaution in having him thus pinioned, useless, as you will discover when we mention the horrible tortures to which he was about to be subjected.

———"Quis talia fando
Myrmidonum, Dolopumve aut duri miles Ulysses
Temperet a lachrymis."

The instruments necessary to this operation were, a common metallic catheter, a lithotome, which was an instrument bearing a strong resemblance to an abscess lancet set in a wooden handle. Two iron rods called conductors were employed, one, the male, furnished with a ridge along its whole length, the other, the female, was bent and grooved at its extremity. These, with forceps, were the most important instruments. But who shall describe the complexity of others that embarrassed the operation—the simple and compound dilators, the aperiens, the lateræ! Instruments well calculated to perplex the surgeon and to torture the patient, but not to extract the calculus.

With the lithotome, originally with a razor, the incision was made through the bulb of the urethra to the catheter, which had been previously introduced. A probe was then slipped in along the catheter to the bladder, then the male conductor was slipped in along the probe, and the female conductor slided along the male. The surgeon then seizing the projecting ends

of the conductors, separated them in correspondence with the median line of the body. Thus commenced the process of dilatation, as it was denominated. This dilatation was nothing less than a violent laceration of the membranous portion of the urethra, the prostate gland, and the neck of the bladder. Can any operation be more dreadful than this laceration? Reflect on the exquisite sensibility of the urethra, and then conceive, for a moment only, the introduction of a probe or a catheter, and then the forcing of two iron rods into this delicate membrane. Look at the remorseless surgeon, with an unrelenting hand, stretching, jerking, and tearing this membrane, on which the finest sensibility has been conferred, for half an hour together. Think of the laceration of the prostate gland, and you cannot wonder that the poor sufferer was bound so firmly, or a monster placed behind him to press him to the table and drown his cries.

When the laceration (for dilation it was not) was supposed to have become sufficiently large, forceps were introduced, and the stone was seized. This grasping of the stone was the signal for a renewing of the tortures of the patient. The surgeon was generally fatigued before the operation was carried sufficiently far to allow the exit of the calculus. This, however, was of no consequence, as the dragging out of the stone would only be an increase of the tearing. When the forceps were found too weak to educe it, additional instruments, called lateræ, were applied round them, and then by increased power, the cause of the calamity was brought out. A silver canula was then introduced, and the canal was stuffed with lint and plugged with compresses.

That this barbarous operation, having in it more of the infernal than the human, could have taken the place of the simple Celsian section, must appear incredible to every one not acquainted with the ideas and feelings of the profession at the period of its introduction. It was an invention that the common lithotomists had neither the presumption nor the cruelty to attempt. The pride and pecuniary advantages attendant on inventions, frequently induce, as it induced the physicians of the

age to which we are referring, to multiply writings in their vindication. These writings, which are of the most pompous descriptions, abounding with sesquipedalian words, were well calculated to produce a powerful effect on this half enlightened age.

The apparatus major, once in fashion, every surgeon found himself under the necessity of rendering the subject more complicated by the introduction of some new instruments. Fabricius, of Heldanus, that illustrious surgeon and philosopher, though he preferred Franco's mode, with a fanatacism that would have seemed inconsistent with the talents of a man so eminent, devised new instruments for this execrable grand apparatus. Like an official of the inquisition, he valued himself, we fear, on the discovery of new modes of torture. Alas for man! amid the multiplied calamities of his dejected condition, that the means of relief should be found more tremenduously formidable than the calamities themselves. We would hope that merely to torture could never have been the aim of any surgeon under the sun; but where *real ignorance* and *fancied science* are united, their offspring are "misery, lamentation, and woe." Under various modifications, the mode of operating which we have described continued predominant until the year of 1664. At this period a man named Rau appeared in Paris as a professional lithotomist. His was neither the high operation nor the grand apparatus. He adopted a novel mode. He made his external wound to correspond with the internal, in order that uriniary extravasation might not occur. For along period his ability was distinguished.

Lateral Operation.—Some time after, a wandering lithotomist had the honor of presenting a new, but in his uninstructed hands, a very imperfect mode of operating for the stone. I allude to the celebrated Frere Jacques. His early life had been spent with one Paulon, a lithotomist, from whom he acquired the manipulation of cutting. He visited Paris, where, at first, he was well received, permitted to practise his art in the Hospital, and was presented to the King. His piety was ardent, his enthusiasm unbounded. Considering himself anoint-

ed of the Lord for this most important office, he operated with boldness, and his success was surprising. His method is thus described by Bussire.

"He never tied his patients. He introduced his staff, large, round, and having no groove, into the bladder. Holding it in his left hand, he pressed it so against the perineum as to make the part project, where he meant to strike. Then taking into his hand, a long knife, dagger-shaped, he plunged it in, fearlessly, near the left buttock, two inches from the perineum; pushing it onwards, he opened the body of the bladder as near as possible to the neck, and never once withdrew it until he had produced an orifice equal to the magnitude of the stone. He then introduced his finger and forceps, and drew out the stone, leaving the patient with the words "The operation is finished—*God will cure you.*"

As might be expected, such an operation, in the hands of an itinerant, perfectly ignorant of the structure of the parts, into which he unhesitatingly penetrated his pious knife, could not always be successful; and yet his success was great. If the powers of immagination can enlist with advantage any principle that can assist in recovery from disease, he certainly fixed on the noblest which human nature can conceive. Wholly disinterested, it was nevertheless his lot to meet persecution in its most violent forms. The whole circle of medical men rose in arms against him, and he was reduced to the necessity of leaving Paris. Some years afterward he returned. Fagon, the physician of the king, who at this time labored under the disease whose history we are tracing, persuaded him to study anatomy, and allured him to the use of the grooved staff, by means of which, his operations were rendered still more certain, and his success in consequence still more brilliant. Adopting this improved mode, he operated on thirty-eight patients, in succession, at Versailles; every one of whom recovered. This benevolent man travelled over a large part of Europe, pursuing his profession and receiving no compensation but what was requisite to repair his instruments and pateh his shoes.

During the time he was in Holland, Rau, who was afterwards a professor in the University of Leyden, caught, as it is supposed, from him, the modus operandi. Rau, however never revealed the peculiarities of his mode. Surgeons crowded to witness his operations; but to every solicitation for explanation, he would reply, "CELSUM LEGITOTE." It has been asserted that Rau cut 1640 patients, and that not one of them died. This has been considered exceedingly questionable.

"Credat Judæus Apelles—non ego."

After the death of Rau, which occurred in 1719, various experiments were made for the purpose of obtaining his mode of operating for lithotomy. Among these experimentalists was the celebrated Cheselden. After a series of trials, he became convinced that it was impossible to open the bladder, with safety, without striking through the membranous portion o the urethra and the prostate gland. On this he discontinued his investigations, and directed all his skill and practice to make the operation succeed. The experiments of Cheselden, previous to this determination, were called his first method. His second method was this. A grooved staff was introduced through the urethra. The skin and fat were pierced just as the operation is, in the present day, performed. The fore-finger was introduced into the upper angle of the wound, and the groove of the staff felt—the assistant then drew up the staff as high as possible under the arch of the pubis, that the knife might not touch the rectum. The membranous portion of the urethra, the prostate gland, and the neck of the bladder were then divided by pushing forward the knife. The left fore-finger being kept along the groove on the back of the knife. The beak of a blunt gorget was introduced into the groove, and urged on to the bladder—the staff was then withdrawn, and the forceps passed in along the concavity of the gorget. The third method which he practised afterwards, differed very little from the second. In the third, he cut the prostate more fully than he did in the former, while engaged in withdrawing his knife. While operating agreeably to the manner ascribed by

Albinus to Rau, he lost four patients out of ten, but in pursuing his own improved method, his success was most splendid. Of 52 patients on whom he successively operated, he lost but 2. In fact, of the whole number of persons whom he proceeded to relieve, and which consisted of 213, he lost only 20.

The mode of Cheselden, which we trace through Rau to Frere Jacques, and which was now called the lateral mode, acquired popularity abroad, and was illustrated and perfected at home, by Sharp and Broomfield.

About the middle of the 18th century, another itinerant Friar produced a considerable change in the French lithotomy. The invention of a new instrument was published in a French newspaper, and ascribed to a Friar, named Come. This instrument consisted in a curved bistoury about five inches long, which was concealed in a slender steel case, but from which it could be brought out by means of a spring, and the angle which it would form with the case could be estimated by a scale on the handle. Now in the operation of Frere Come, the first incision of Cheselden down to the grooved staff, was practised. The lithotome cache, which, when shut, was nothing more than a common probe, was slipped along the grooved staff into the bladder; then touching the spring, the blade appeared, and in drawing out the instrument, the neck of the blader, the prostate gland, and the membranous portion of the urethra were divided. This operation, slightly modified, prevailed universally in France, and is still employed in that scientific country.

The following extract from Tavernier's excellent work on operative surgery, will exhibit the manner in which this operation is performed at the present day.

"The lateral operation, which is at present almost exclusively adopted in France, consists in making an incision upon the left side of the perinæum, commencing about one inch in front of the anus, and extending as far as the middle of a straight line drawn from the anus to the tuberosity of the ischium, including the adipose cellular tissue which is contained in the space between the erector penis and accellerator urinæ muscles, the transversus perinæi, the anterior fibres of the levator ani, and the membranous part of the urethra, and in dividing from within outwards, according to the method of Frere Come, the neck of the bladder and the left lateral part of the prostate,

by means of the instrument called the *lithotome cache.*—We shall now proceed to give an account of this operation as described by Professor Boyer.

Apparatus.—The instruments which are required for performing this operation are a silver catheter, and a grooved staff of as large a size as will easily admit of introduction; a lithotome cache; a sharp gorget; a large sclapel for making the first incision; a blunt-pointed curved bistoury; forceps of various sizes and forms, for extracting the stone; a syringe for washing out coagula of blood or particles of stone; several gum-elastic or silver canulæ; ligatures, and a pair of ligature forceps; two strong garters or bands, for tying the patient's hands and feet; a bowl of warm oil, and basins containing tepid water, and a decoction of marsh mallows.

Preliminary arrangements.—Before the operation is commenced, it is necessary to procure a firm table, of sufficient height, about three feet in width, and from four to five in length. This table is to be covered with a mattress, which is fastened with a rope, and arranged in such a manner as not to pass over the edge upon which the patient is to be placed; a pillow should then be laid at its upper end, and the mattress should be covered with a folded sheet, which is to be left hanging to within a foot of the floor. About an hour before the operation is commenced, care should be taken to shave the perinæum, and to empty the rectum by means of a clyster. This last precaution is of the utmost importance, and should never be neglected. It need scarcely be remarked here, that, a short time before the operation, the patient should be kept on low diet, take the warm bath, and drink plentifully of diluent drinks: he should also be desired to refrain from sleeping on the day on which the operation is to be performed, and if he be irritable, he should take about fifty drops of laudanum.—Five assistants are usually required in this operation, two for holding the thighs and legs of the patient, one for steadying the shoulders, and another for holding the sound and the scrotum, and the fifth for handing the instruments to the operator. In operating upon children, it is necessary to have another assistant to steady the pelvis, by placing his hands upon the spine of the ilium.

Having every thing ready, the patient is to be placed upon his back, his head is to be slightly elevated, and his thighs and legs are to be held by two assistants. The surgeon then takes the staff, first dipped in oil, and after having introduced it, and ascertained that the stone is really in the bladder, the instrument is to be given to an assistant standing on the left of the patient. Two strong garters or ligatures, each about two yards in length, are then to be doubled, and placed by means of a noose round the patient's wrists, who is next to take hold of his feet with his hands, in such a manner that the fingers shall be applied to the soles, and the thumbs upon the dorsal surface. The two ends of the garter are then to be carried in opposite directions round the ankle, over the back part of the hand, and under the foot, so as to form a kind of figure of 8; after which they are to be tied in a bow.

The ligature being thus applied at the same time on each side, the two assistants who are to hold the extremities, apply the patient's knees against their breasts with the right hand, while they take hold of the soles of their feet with the left. Another assistant, who stands behind the patient, applies his hands upon his shoulders to prevent him from moving back, while the one who hands the instruments is to stand on the left of the surgeon.

Operation.—First stage.—"Every thing being thus arranged, the operator, standing between the thighs of the patient, and a little towards the left side, places the staff in a direction perpendicular to the axis of the body, by inclining its handle towards the patient's right groin, and gives it to an assistant, who is to be requested to hold it perfectly steady. If the scrotum be small, he should hold it up with the ulnar edge of the left hand, and extend the skin of the perinæum transversely with the thumb and fore-finger but if it be large and pendulous, the assistant who holds the staff should keep it up with the left hand, taking care not to compress the testicles, and draw the skin of the perinæum from below upwards. The surgeon then takes a scalpel in his right hand, and holding it as in cutting from without inwards, he makes an incision through the skin and adipose cellular tissue on the left side of the perinæum, extending from the raphe, at about an inch above the anus, to the middle of a straight line drawn from the anus to the top of the tuberosity of the ischium." This incision should be from two to three inches in length, and extend merely through the skin, the adipose cellular tissue, some of the fibres of the erector penis and accelerator urinæ, the transversus perinæi and the anterior fibres of the levator ani muscles. It may be laid down as a general rule, that it should rather be too large than too small, in order to prevent urinary infiltrations. In corpulent individuals, this first incision does often not extend as far as the urethra, so that it becomes necessary to make it deeper. When it is finished, the surgeon has to introduce the left index-finger, in order to ascertain the situation of the sound and judge of the thickness of the parts by which it is covered. If this thickness be considerable, it will be requisite to extend the incision still deeper; after which the index-finger is to be disposed in such a manner that its radial edge shall look downwards, and that the left edge of the groove of the staff shall be lodged in the hollow which separates the nail from the bulb of the finger. The operator then takes a straight bistoury, held like a writing pen, carries its point upon the nail, and passes it into the groove of the staff across the parietes of the urethra. When it has arrived there, which may always be known by the immediate contact of the two instruments, the extremity of the finger is to be applied upon the back of the bistoury, and while its handle is gently raised, its point is to be passed into the groove of the staff. The handle of the bistoury is then to be depressed, in order to make the instrument describe the segment of a circle round its point, which is to be kept firmly fixed, and to divide the part of the urethra by which it is covered. The incision of the urethra should be from eight to ten lines in length, and should extend, if possible, merely through

the membranous portion. When this incision has been made, the surgeon takes the lithotome cache in his right hand, and passes its beak into the groove of the staff. Having done this, he takes hold of the handle of the latter instrument with his left hand, and brings it towards the arch of the pubes, at the same time that he pushes the lithotome from below upwards, in order that its beak may retain its situation in the groove. The lithotome being thus introduced into the bladder, its beak is to be gently struck against the staff, and after having ascertained that it is still in the groove, it is to be pushed in as far as the point where its extremity terminates in a cul-de-sac, at the same time that the handle of the staff is brought a little towards the surgeon. The latter instrument is then to be withdrawn, while the operator takes the lithotome at the junction of the blade and sheath with the thumb and fore-finger of the left hand, and holding it in a position parallel to the external wound, he disengages the cutting blade of the instrument from its sheath. The surgeon is then to draw the lithotome towards himself, in a perfectly horizontal direction, so as to make the requisite division of the prostate gland and neck of the bladder.

"The great art of conducting the lithotome," observes M. Boyer, "consists in giving it a perfectly horizontal direction, and in carrying the edge of the blade parallel to the incision in the integuments. If the handle of the instrument be elevated, there will be danger of wounding the bas-fond of the bladder; if it be depressed, the incision through the prostate gland and neck of the bladder will not be proportioned to the degree of the opening of the blade; if the blade of the instrument be directed too far outwards, there will be danger of injuring the inferior, and, perhaps, the deep-seated branch of the internal pudic artery; and if the edge be carried too far down, it will be likely to interfere with the rectum." In order to avoid these inconveniences, this surgeon has advised, in operating upon adults and old people, never to open the blade of the lithotome beyond No. 11, and in most cases not farther than No. 9, preferring to enlarge the incision, if this be found necessary, to make it too large in the first instance. M. Boyer is also in the habit of applying the beak of the lithotome against the neck of the bladder, instead of letting it rest against the arch of the pubes, and of holding it in a transverse direction. After the prostate gland and neck of the bladder have been divided to the requisite extent, he again fixes the sheath to the instrument, and then withdraws it. By this method the internal incision is almost transverse, and forms a very obtuse angle with the external opening; but this angle may be readily effaced by pressing it with the finger, and presents no impediment to the introduction of the forceps, or the extraction of the stone. The author states that he has been in the habit of using the lithotome in this manner for the last ten years, and that he has never opened an artery large enough to produce any unpleasant hemorrhage.

Second stage of the operation.—After having made the requisite division of the prostate gland and orifice of the bladder, the surgeon

introduces the left index-finger into the wound, in order to ascertain its extent, and be able to judge of the situation and size of the stone; this finger is also to be used to guide the forceps, unless the patient is very fat, and has a very enlarged prostate; in which circumstance it will be impossible to carry the finger into the bladder, and as it is then to be feared that the forceps will become entangled in the cellular tissue, and pass between the prostate and the rectum, it will be necessary to have recourse to another expedient. This consists in placing the fore-finger in the interior angle of the wound, and in applying the concavity of a gorget upon its radical edge, and introducing it into the bladder by pushing it from below upwards. When the gorget has arrived in the bladder, the finger is to be withdrawn, and the concavity of the instrument is to be brought upwards, while its convexity is to be made to rest slightly against the inferior angle of the wound. The surgeon then takes the forceps, and passing the index-finger along their blades, he makes them glide obliquely from below upwards, into the groove of the gorget, taking care that their convex surface shall correspond with the sides of the wound."

Bi-Lateral Operation.—This favorite operation of the Baron Dupuytren differs very little from that which has just been described, save that his lithotome is double. Two blades spring out from the trunk of the instrument, and are so used as to cut the prostate gland and membranous portion of the urethra on both sides, (whence the name bilateral). A greater space is thus obtained for the eduction of the calculus. In the hands of the distinguished operator I have just mentioned, this has proved a safe and certain mode. But I believe it has not spread very widely.

Recto-vesical Operation.—This operation was invented by Dr. L. J. Sanson. An attempt has been made to rob him of the honor, by stating that the operation had been described by an Italian in the 16th century, in a work published at Basle, under the name of Vegece, respecting whom the celebrated Haller uses the following words: "Jubet per vulnus recti intestini, et vesicæ aculeo lapidem ejicere." (*Bib. Chirurg.*, *T. I.* p. 102). The operation, improved by Vacca Berlinghieri, is performed in the following manner, as described by Coster in Manual.

"The patient is placed as for the lateral operation: the staff is held perpendicularly by an assistant, the groove neither being turned to

the right nor the left. The surgeon introduces the fore-finger of the left hand into the rectum, glides flatwise on the palmar face of this finger, the blade of a straight bistoury; and after having turned its edge upwards, he cuts by a single stroke from behind forwards, and in the direction of the raphe. This incision extends equally through about an inch of the intestine and raphe. The inferior surface of the prostate gland, being thus exposed, the finger easily perceives through the inconsiderable thickness of the parts, which separate the rectum and lower fundus of the bladder, which approach each other, the staff, which the assistant should always hold in the same position.

The surgeon passes the point of the bistoury behind the prostate, and again directs it from behind forwards, to make an incision through the prostate, urethra, and neck of the bladder, by carefully avoiding to injure its lower fundus. By this method the incision of the intestine will be found about an inch lower than the superior angle of the incision made through the neck of the bladder, and the walls of the rectum form a valve which prevents fecal matter from passing into the bladder.

The stone is then removed in the usual manner.

We neither introduce compress nor lint into the wound; and when the inflammation subsides, we touch the edges of the wound with lunar caustic, to hasten the cicatrization."

ART. VII. *A Treatise on Hysteria.*—By George Tate, M. D., Member of the Royal College of Surgeons in London. Philadelphia: E. L. Carey and A. Hart, 1831. pp. 131.

WE know of no disease to which the epithet of "opprobrium medicorum" is more appropriate, than to hysteria. It assumes the mask of so many diseases, and presents itself under such a variety of forms, that while at one time, by its strange fantastical shapes, it exposes the sufferer to the ridicule of her acquaintance, at another, it subjects her to the most excruciating agony that the human frame is ever called upon to bear. Cancer, tetanus, and hydrophobia are so generally acknowledged to be incurable, that our remedies are administered without the hope or expectation of success; and if they are successful in alleviating the gloomy passage to the grave, the friends of the sufferer are abundantly satisfied. In hysteria, on the other hand, we are often mocked with delusive expecta-

tions of success, until the spirits of our patients fail under the pressure of disease, and the sickness of hope deferred; and, not unfrequently, is the physician mortified to discover that the constitution of the patient has been rashly sacrificed, while he has been combatting with herculean remedies, some of the symptoms of this ever changing disease. Under these circumstances, every thing which can throw a ray of light upon this mysterious subject, must be acceptable to the profession, and under this impression, we proceed to lay before our readers a brief account of the work before us. We believe, with the author, that this class of diseases is not generally understood, either by young or old practitioners; and are convinced by painful experience that none requires more discrimination and judgment to detect and treat them successfully.

In the 2d chapter, the author treats of the cause of hysteria, and asserts that in all its varieties it has one common origin, which is essential to its appearance; namely, irregular or defective menstruation.

"There is always some deficiency or some depravity of this secretion: it will be be found sometimes altogether suspended; sometimes redundant, or too frequent in its recurrence; sometimes dark and grumous; at others, pale and watery; sometimes it is attended with agonizing pain and sickness. Sometimes, also, Hysteria will take place previously to, and be indicative of, the first appearance of the menses; and sometimes it will occur when there are about to be no more seen. The common conditions, however, under which Hysteria prevails, are catamenial suppression, insufficiency, or depravity." p. 11.

Debility, connected with a deranged state of the stomach, liver, and bowels, certainly predispose to this disease, but the disease, far from being confined to females of a delicate texture, frequently attacks the healthy and robust. On the other hand, if it be true, as the author asserts, that disordered uterine secretion is an invariable forerunner of the disease, the fact goes far towards justifying him in assigning this as the cause of the disease.

Dr. T., looking to the common origin of the various forms of diseases which he describes as hysteria, has avoided all nosolo-

gical distinctions; only for the advantage of description, marking *hysteria of the first, second, and third degree.*

Chapter III. treats of *Hysteria of the First Degree.* The following description, although deficient in several important, particulars, has the important recommendation of simplicity and conciseness.

"It occurs like other forms of Hysteria, almost invariably between the ages of thirteen and forty-five. It is always attended with some irregularity about the menstrual discharge; and the stomach, liver, and bowels (one or all) are generally out of order. It is characterized by alternate fits of laughing and weeping, starting and screaming, lying still as death, and strugling with gigantic strength. Generally, there is a loud rumbling in the bowels called Clangor Intestinorum, and the Globus Hystericus, as it is called, which is, in fact, mere flatulence, causing a sensation like that of a solid ball rising in the throat and producing a sense of suffocation." p. 16.

The author rejects the copious secretion of pale urine, as being at all a sympton of this disease.

As to the treatment, he represents the antispasmodic treatment as a remnant of an antiquated and false pathology, and speaks of the fetid drugs only as a suitable punishment for those, in whom the disease is the consequence of affectation, or a morbid and vicious sensibility unreasonably indulged. He depends entirely upon brisk cathartics, a mild and nutritious diet, and the use of aloes and iron until the alvine and uterine secretions are properly regulated.

Chapter V., *Symptoms of Hysteria, of the Second Degree.* In this chapter the author gives the essential and diagnostic symptoms of hysteria, by which it may be recognized among the infinite, varied, and contradictory forms which it so capriciously assumes. As this chapter contains the peculiar views of our author, we shall quote from it at considerable length.

"I.—In the first place, menstruation is defective. It always is, and has generally been some months prior to the attack, in some respect, more or less deranged. This derangement is the 'head and front' of the case; the original cause of the disorder; that upon which all the other symptoms are more or less dependent.

"II.—The next circumstance, and the most important of the whole list, whether as regards the discrimination of the disorder, or its treatment, is this:—that, in every case, there is distinct pain upon the application of pressure or of heat, to three or four of the six superior dorsal vertebræ. This is a point upon which I desire to fix the reader's attention; for this spinal affection, whatever its intrinsic quality, is clearly chargeable with most of the curious images, and fantastic forms, that Hysteria is accustomed to put on; and yet. notwithstanding its constant occurrence in these forms of Hysteria, and its frequent existence where there is even a tendency to Hysteric disorder, it is a circumstance that has been overlooked by those who have professed to treat upon the subject, as well as by those who, for the sake of gratifying curiosity, have published detached cases of Hysteria under various other designations.

In other parts of the spine, especially in lumbar vertebræ, pain is frequently complained of foe a long time; but, in the dorsal divisions, no uneasiness is generally felt until pressure is made upon them. Indeed, if the patient be asked if she have pain between the shoulders, she will usually answer, No! and will think it very troublesome to be disturbed for the purpose of exposing the part to examination. Proceeding from the uppermost cervical vertebræ gradually downward, she will smile at the inquiry, "if the pressure of the fingers hurts her?" until you reach the dorsal vertebræ; when her countenance will immediately betray her, and she will shrink from the touch, confessing that the pressure causes a pain which frequently, but not always, goes through either to the chest or to the left side, sometimes to both, and generally oppressing the breath.

I do not mean it to be understood that this pain is always present to the same extent: sometimes the vertebræ are extremely tender, even upon the lightest pressure or the least heat, and at other times they bear a moderate degree of both without much suffering: but the pain is invariably present in greater or less force, bearing some proportion generally to the violence of the Hysterical manifestations; and leaving an aching or soreness in the part for some time after the fingers have been removed.

III.—Another thing to be attended to as a diagnostic symptom, is pain in the left side. This is very peculiar. It is usually situated immediately below the left breast, in a hollow formed between the cartilages of the fifth and sixth, or sixth and seventh ribs; it is generally so circumscribed, that it may be covered by a shilling; and is of the gnawing kind. Occasionally, however, it is most acute, feeling as if a knife were being struck into the spot, and the patient cannot forbear screaming. This pain is complained of for some time before the invasion of the Hysteria. The patient is often observed to incline the upper part of the body to that side, dropping the left shoulder, which relaxes the painful part and affords some relief. The act of raising the left arm above the head, or of bringing the body into a perfectly erect position, is attended with an increase of pain. I apprehend this pain is really seated in the intercostal nerve, although I

have thought it must be situated in the nerves of the heart itself; as it is difficult to account for its perpetual preference for the left side. The right side, certainly, is often not exempt from pain; but in nineteen cases out of twenty, the prominent grievance is in the former; and in the like proportion of instances, I can put a finger on the spot with as much certainty as if it were visibly marked.

I am convinced that many spinal curvatures have arisen solely in consequence of this pain, which is often of very long standing, causing a tendency to lean the body constantly out of the perpendicular line, towards the affected side. In these cases, nothing is more easy than to mistake the effect for the cause. When, therefore, other symptoms supervene, and a medical man is called in, he must not immediately determine the curvature to be the cause of the patient's illness, as it will frequently turn out to be merely a consequence of another disorder. I have seen a young lady confined to her bed for nearly three years by this very mistake; and nothing was gained by it but an increase of weakness.

IV.—Palpitation is another symptom that is almost universally present, to guide the judgment in these disorders; and it is often distressingly violent. A sense of fluttering about the heart is also very common.

In addition to these, there is always pain in the head, in front, or in the occiput, or in both; intolerance of light, which is sometimes so extremely urgent that the patient is easy only in absolute darkness, and generally more or less globus.

Such are the special symptoms which denote Hysteria of the second degree. A suspended, irregular or painful menstruation; pain upon pressure upon some of the dorsal vertebræ; pain underneath the left breast; palpitation or fluttering at the heart; more or less pain in the head; intolerance of light; and more or less globus. These are almost unfailingly combined in every case; and, in the great majority, are accompanied by pain or aching in the arms and legs, and across the loins,—furred tongue—constipated bowels,—and dyspnœa. The pulse is sometimes quick, variable, or intermitting; at other times perfectly natural.

In the treatment of this disease, the author lays down two indications of cure; 1st, The removal of the hysterical evolutions; 2d, The restoration of the uterine and other secretions. Bleeding, he remarks, will rarely do good. It never, in his opinion, relieves the spasms; and, although, in some plethoric individuals, it may do no harm, it frequently produces the most serious injury.

In relation to this remedy, while we admit the necessity of the utmost caution in detecting those symptoms which simulate inflammation in hysterical patients, we cannot but think that the

prohibition of blood letting is entirely too exclusive. Hysteria very frequently occurs in very opposite conditions of the system. The cause which, in the opinion of our author, alone produces it, is more frequently brought on by exposure to cold, than by any other morbid agent; and hence the disease frequently partakes of those inflammatory symptoms which so generally accompany the derangements of the system produced by atmospheric vicissitudes. It also frequently occurs in persons of full health and vigor, in whom the sudden suppression of all the excretions must, of necessity, produce such a degree of plethora, as with the nervous excitability which now takes place, will imperiously call for the lancet.

But the author's great remedy is the tartar emetic ointment; in the application of which, he should certainly be allowed to speak for himself.

"Having made a careful examination of the spine, and ascertained the seat of pain, the first thing to be done, is to apply the tartar emetic, either by friction or plaster upon the spot. If the symptoms be urgent,—whether Cataleptic, or choreiform, or tetanic, or hemiphlegiac, or any other,—the application should be carried throughout the whole course of the vertebræ; and this should be done every six or seven hours, until the pustulation is fully developed. The Hysterical symptoms will then begin to yield, and the patient will become calm and sensible: but as the cause of the spinal disorder, viz: the faulty uterine function, is still in operation, it is sometimes necessary to establish the eruption "*iterum iterumque*," in order to secure the patient from a recurrence of the same symptoms. In the meantime, every exertion must be used to improve the condition of the uterine organs.

Upon the discovery of this tenderness between the scapulæ, I have frequently leeched the part, which has always failed to afford any important relief: I have afterwards blistered the spine, without deriving therefrom at best, more than partial benefit; but I cannot too often repeat, that the antimonial eruption exerted always a most powerful influence over the disorder, controlling its various manifestations,—relaxing muscular contractions,—and dispelling the tenderness upon pressure, and the pain on the application of heat." p. 47, 48.

In addition to this, Dr. T. reccommends active purgatives, which seldom fail to bring away dark unhealthy evacuations; and this plan should be pursued at the discretion of the practitioner, until the discharges assume a natural aspect.

The second indication—of restoring a healthy menstruation, must be conducted upon general principles—improving the secretions and correcting the state of the stomach, and other digestive organs. After this, air, exercise, the warm, tepid, or cold bath, with the preparations of iron, constitute the best tonics.

In support of his opinions, Dr. T. details a number of cases drawn from his own practice, and from the Medical Journals; of some of the most interesting of which, we will present an abstract to our readers.

Case 1. A healthy looking country girl came to Dr. Tin, April, 1825, complaining of her eyes, which seemed inflamed, with a great intolerance of light, and a copious flow of tears. Venesection to eight ounces, relieved these symptoms, and rest, low diet, and an active purgative, were prescribed for her. Having been sent for in great haste on the next morning, he found her in great agony, breathing with excessive labor, pressing her hand firmly against her left side, and giving indications of acute pain in that region. The breast sounded well, and the skin was warm, and covered with profuse perspiration.

Upon inquiry, he found that menstruation had been scanty for more than a year, and for fourteen weeks had been entirely suppressed, and that she had suffered from palpitation and pain in the side. Pressure upon the four uppermost dorsal vertebræ produced pain, which was referred to the left side, and scrobiculus cordis. These symptoms led the author at once to the opinion that the disease was hysterical. At the instigation of her friends she was again bled, without relief; but Dr. T's principal reliance was upon the tartar emetic ointment, and upon active purgatives. These means were assiduously employed. On the first day, many offensive evacuations were procured, but without relief. On the third day, the eruption began to appear, the symptoms were very much mitigated, and on the next day, were entirely removed.

From this time she gradually recovered her strength, but the catamenia did not return, and in six weeks she had a new attack. This attack also yielded to the antimonial plaster, al-

though a blister had been ineffectually applied to the whole course of the spine. A third application of the ointment was necessary to remove the tenderness completely; and having since menstruated, she has enjoyed uninterrupted health.

Case 2. Miss W., aged 15, after several days of slight indisposition, awoke in the morning, after a tranquil night, with a train of symptoms resembling tetanus. She was resting on the head and heels, the body being bent into the form of an arch, the arms and legs being flexed and rotated inwards, and the fingers and toes being violently closed. She was perfectly sensible, and complained of great heat and pain in the head and intolerance of light, and squinted very much. Pulse 110, skin hot and covered with moisture. Dr. T. examined the spine, and the instant pressure was made on the dorsal vertebræ, the patient complained of pain. By the free action of purgatives, the head and the respiration were somewhat relieved, but the spasm continued unabated, until the eruption was produced by the antimonial ointment, and in twenty-four hours after this, all the symptoms had vanished. Once or twice the tetanic symptoms returned, but they were promptly relieved by a second application of the ointment. In five weeks from the attack, she menstruated, and has since remained well.

Case 3. In January, 1825, Dr. T. saw, for the first time, Miss L., aged 19 years, who had been in delicate health for nearly four years. For several days she had had an acute pain in the side, increased by inspiration, but relieved by pressure, and so severe as to require her friends "to hold her sides for hours together." A short time before Dr. T. saw her, she fell back in her chair, apparently lifeless. Respiration would, for a time, be, apparently, perfectly suspended, then a deep inspiration followed by rapid breathing, would, be followed by a death-like stillness. All this time her pulse remained regular, except occasional violent palpitations. When she recovered for a short time, she conversed rationally, but complained very much of her head, side, and chest, and of great sensibility to the light.

Dr. T. having convinced himself that there was no disease of the heart, examined the spine, and found that pressure on

the dorsal vertebræ produced pain, which, passing to the side and the pit of the stomach, increased the difficulty of breathing.

The catamenia which had appeared a few days before, was unusually scanty and dingy. The antimonial plaster was applied to the back, and when the eruption came out, the symptoms very soon subsided. Once or twice there was a slight relapse, but the symptoms were soon dissipated, and she has since enjoyed tolerable health.

Case 4. E. M. aged about 20, of a delicate constitution and feeble health, had suppression of the menses for several months. When Dr. T. saw her, she was in a state of insensibility, and affected with the most violent convulsions; pulse active and bounding. Blood was drawn without relief. Active purgation relieved the convulsions, but the insensibility continued unabated.

The tartar emetic ointment was applied, and when sensibility was in some degree restored, the spine manifested an unusual degree of sensibility, extending to the left side, and producing an excessive degree of tenderness under the ribs on the right side. These symptoms were all relieved by the tartar emetic ointment; the menses were brought back by the usual combination of aloes and iron, and the patient has since enjoyed better health than at any former period of her life.

Case 6 was accompanied with violent convulsions, of a choreal character, lasting for hours, with complete insensibility. In the intervals, she complained of the globus, intolerance of light and noise, palpitation, pain in the left breast, in the head, and down the arms. The menstrual discharge had been for several months of a dark and depraved character, and attended with severe pain in the loins. Bleeding, leeching, blistering, active aperients, with ammonia, valerian, and other antispasmodics, had been tried without any other effect than to increase her distress. The antimonial ointment was applied—in three days the eruption came out, and the unpleasant symptoms vanished.

The author, in Chapter VII., gives a transcript from the Med. Chirurg. Review, of nine cases of anomalous disease, treated

by different practitioners under different names, or under no name at all, which he supposes to have been cases of hysteria. It would be no slight degree of labor, to recapitulate the various symptoms which are here recorded; it is sufficient to say that the catalogue would include almost every symptom of every inflammatory and every nervous disease. The catalogue of remedies is less formidable only than the symptoms.—The lancet, leeches, cups, purgatives, blisters, setons, issues, acupuncturation, tonics, alteratives, and the whole class of emmenagogues, every thing, in short, but the antimonial ointment, to the spine. These cases had the common symptom of suppressed or imperfect menstruation, and if any thing were wanting to convince us of the justness of the author's views in referring them to this common cause, we should have it in the tenacity of life which these patients display, and the manner in which they bear up under the violence of the disease and the severity of the treatment.

One of these cases which terminated fatally, we shall present to our readers, since hysteria so seldom proves directly fatal, that the *post mortem* examination is both interesting and important.

"The following is from No. XIII, New Series, Page 146. It is headed "*Chorea fatal.*"

"E Smith, aged 17, was admitted into the Middlesex Hospital, under the care of Dr. Hawkins, on the 5th of September, 1826. She had just recovered from a severe attack of rheumatism in her knees and shoulders, which lasted seven weeks. A fortnight before her reception, she was seized with involuntary convulsive movements in the legs, arms, and neck. These had continued ever since with great violence. *The catamenia had been suppressed four months.* She had head-ach, thirst, pain in the back, pulse 96, tongue loaded, bowels constipated. She was actively purged without success. The calomel, senna, and turpentine, always dislodged dark and copious motions; but produced no alleviation of the convulsive spasms, which were like those of hydrophobia. She could not hold her head quiet for an instant, and the grinding of her teeth was so violent as to force one of them from its socket. The convulsions were uninterrupted, except by short intervals of broken sleep. Her intellects were unimpaired. She was put into a warm bath, which aggravated her convulsions, produced great irritation, and inflammatory symptoms.

Sixteen ounces of blood were drawn; it was *inflamed.* She was bled again the next day,—still very little alleviation of the spasms. Musk was then tried without effect. Camphor and opium procured her some sleep: after taking them the second time, she slept soundly; awoke, and soon afterwards expired on the 13th of September: being eight days after her admittance.

"*Dissection.*—No morbid appearance could be found in the brain. There were tubercles in the lungs, and earthy concretions in various parts. Adhesions between the liver and adjacent parts, intestines healthy in appearance; omentum and mesentery studded with numerous cysts: some containing a black semifluid matter, others calcareous depositions. Several large concretions in the pancreas. *The uterus was rather large and vascular, and the lining membrane of its body and fundus highly injected. The Fallopian tubes and ovaries contained a good deal of the black matter above-mentioned.*"

In all these cases, attended by eminent physicians, it is remarkable, that although suppressed menstruation preceded the other symptoms, it never occurred to their minds as the cause of the disease; and it is perhaps not less surprising, since irritation of the spinal marrow has of late attracted much attention, as the cause of many anomalous forms of disease, that the spine should never have been subjected to examination, the more especially, as many of the symptoms would naturally be referred to irritation of the brain, or spinal marrow.

Chapter VIII. treats of what the author calls *hysteria of the third degree.* This distinction, however, must be understood to relate only to a more insiduous and protracted, consequently a more obstinate and hopeless form of *the same disease.* The same condition of the uterine functions precedes the cases of this kind, and the same spinal irritation attends them, but they generally come on gradually, without the eruption of the more violent symptoms of hysteria, so that the true origin of the disease is not suspected, until the patient sinks into a state of deplorable debility, or by the sudden accession of more violent symptoms, the attention of the practitioner is directed to a more correct pathology. From these cases, the usual marks of hysteria are seldom absent, and they may, therefore, generally, be recognized, if the attention of the physician be not too exclusively directed to symptoms which seem to occupy a more prominent station in the train of diseased action. Like other forms of

hysteria, too, they are seldom dangerous, unless maltreated; but they render the patient as miserable as the absence of enjoyment and the entire destitution of hope can make her.

The following is the author's account of the disease in its most protracted and inveterate form—a general description which he afterwards fills up by a report of cases.

"As before stated, in the most tedious form of Hysteria, menstruation is always more or less faulty at the onset, and as the case advances, this becomes suppressed altogether, or is performed very sparingly, perhaps only once in many months, and then with great pain. Where this function is quite suspended, there is, generally, neither any periodical pain nor any sensation, to show that nature had not forgotten this customary duty. Shortly afterwards, the patient becomes weak and desponding, loses her appetite, and the bloom from her cheeks. She has still nothing particular to complain of, and, generally, keeps up her flesh, although it has every appearance of relaxation. If a medical man sees her now, he will find her with a moist and tremulous tongue; being foul at the root, and having the papillæ, at that part, larger than natural and like little tubercles; with a tainted breath; depraved taste; little or no appetite; with a weak languid pulse; with a sickly yellowish complexion; black or clay-colored alvine secretions, and the urine highly colored and scanty. In a little time, she will have pain under the left breast; which is increased by deep inspiration, and by reclining upon that side,—sometimes pain also in the right side, palpitations, flutterings, sinkings, and together with these, there will be pain upon pressure in one or more parts of the spine; first of all in three or four of the dorsal vertebræ; generally, also, in the lumbar, and if the case be very lasting, it sometimes extends up to the very summit of the cervical portion. In such cases, the headachs are intolerable; being, in some instances constant, in others interrupted, but always violent. The pain is often continued down the arms and into the legs; the extremities are generally clammy and cold. In the midst of all this, the patient is not much reduced in flesh, and for a considerable time, it is not sensibly diminished. As the disease advances, a number of anomalous pains of a neuralgic character, become associated with the other symptoms. Thus, if pressure be made upon the supra or infra-orbital nerves, upon the inferior maxillary, &c., as they issue from their foramina, considerable pain is produced, but I never found these spots complained of, in the absence of such pressure. It is not, however, the facial nerves that are alone implicated, for almost every nerve in the body becomes at the same time, endued with a similar increase of sensibility. This sort of neuralgic affection is seldom observed untill the case is far advanced, and has become equally inveterate and puzzling." p. 90—92.

For the remainder of the cases detailed by the author, we must refer the reader to the work itself. From one only, remarkable for its long continuance, extensive complications, and terrible mismanagement, we shall make a few extracts. This patient came under Dr. T's care, in March, 1825, for an illness of ten years' standing. Twelve different practitioners had attended her with an equal want of success. Her illness commenced shortly after she had menstruated the first and only time.

When I first saw her, she had just returned from a watering place, was so weak that it was with difficulty she could walk across the room, and was obliged to be carried to and from her apartment. Her complexion was sallow, her lips bloodless, pulse small and quick, tongue loaded with a thick, yellowish-brown, moist secretion,—bowels torpid, —dejections of various hues, but always unhealthy—the water uniformly clear and straw-colored. There was a fixed and lancinating pain in a hollow, between the cartilages of the fifth and sixth ribs of the left side; pain under the margin of the ribs of the right side; considerable difficulty of breathing, and frequent violent palpitations. The head-aches were almost incessant, and often nearly distracting by their violence. There was pain upon pressure throughout the cervical and dorsal vertebræ; and pressure between the shoulders, aggravated the dyspnœa. She was sometimes seized with an uncontrollable vomiting, which lasted seven or eight days together; at which times, not a spoonful of cold water would remain upon her stomach; these attacks were ultimately tranquillized by opiate suppositaries, leaving her strength completely prostrate. She scarcely ever closed her eyes to sleep, although her sufferings were so great, that she was lying in a recumbent posture, at times for days and nights together, with her eyes shut in silent agony. She appeared literally not to eat any thing. *She had not menstruated since the beginning of her illness, when she was near sixteen years of age.*

Dr. T. was informed, that about four years before this, a physician had examined the condition of the spine, but paid very little attention to the tenderness in that region, referring it to the position in which she lay. Dr. T. after trying ineffectually to remove the pain in the side, referred the whole disease to hysteria, and applied the antimonial plaster, which produced so much distress, and did so little good, that she obstinately refused to have it renewed. A mild general treatment was then adopted, consisting of aperients and carbonate of iron. A small issue was also established over the seat of the pain, but without

any good effect. Gradually, her condition was very much improved, and the catamenia returned once, sparingly, but never again.

"In this state, she went to the neighborhood of Bath; and, under the direction of an eminent surgeon, was bled once a fortnight. When it was first proposed, she wrote to consult me upon the subject; and I strongly advised her on no account to submit to so life destroying a treatment. However, the surgeon told her, that he had once effected a cure, by this practice, *in a similar case;* and it accordingly was put in force. For twenty-four successive fortnights, this was continued, at the end of that time, I met the young lady in Cheltenham by appointment. She had not been bled for many weeks, as, upon the last occasion that this operation was performed, a long and deep syncope ensued, from which she was with difficulty recovered. She had now an irregular pulse –violent palpitations—œdematous legs, even to the knees—cold extremities—shortness of breath—and a countenance indicative of exhaustion and distress. the left breast was very much wasted, as were also some of the muscles on the side of the chest: producing a degree of deformity that was evident through her clothes. I earnestly entreated her to subject herself to no more such ruinous experiments; but to take wholsome food—to take as much exercise as her strength would bear, short of fatigue; to take no medicine but a tonic-aperient pill; and to use the shower bath twice, and the warm hipbath three times a week. She then proceeded to Leamington, where she has followed these directions. Her health improves, but the wasting, and numbness, of the left breast and side, are making gradual progress. There appears little hope of her complete recovery, although she has already endured little short of a quarter of an ordinary life of diversified suffering." pp. 98, 99.

Comment upon this case is unnecessary. That the physicians entirely mistook its nature, and that the treatment originally employed was every thing but judicious, all will admit. The remaining cases present the same mortifying account of mistaken views and pernicious practice. The author has an additional chapter upon various other forms of disease, under which hysteria masks itself—abdominal enlargement sometimes mistaken for pregnancy, dropsy, pains resembling rheumatism, or the hip-joint disease, &c. &c. These cases may generally be distinguished by their bearing the general physiognomy of hysteria, by the slight inroads made upon the constitution compared with their violence, and by the obstinacy with which they resist every mode of treatment that is not founded upon their hysterical origin.

Upon taking leave of the work, we cannot avoid congratulating the profession upon the prospect of having a new ray of light thrown upon this obscure, intricate, and troublesome disease. Whether tenderness of the spine and mismenstruation are invariably present, we are not prepared to say. Respecting the latter symptom, too many physicians are in the habit of making their investigations in too careless a manner. We have met with a few cases of hysteria in persons laboring under prolapsus uteri, who were either nursing, or who menstruated regularly; and in addition to this, persons whose testimony is entitled to the utmost confidence, have assured us that the position advanced by the author is utterly untenable. We feel inclined to believe, therefore, that hysteria, or many of its symptoms, may be produced by other forms of uterine disease, than the one alluded to by the author, but that it is always connected with an unhealthy condition of the uterus, we have no doubt.

With regard to pain in the spinal column, we believe, from cases that have lately fallen under our own observation, and from many others in which investigation has been made at our request, that this symptom is very generally, if not universally present, though perhaps not uniformly in the dorsal vertebræ.

ART. VIII. 1. *Journal of Health.* Periodical. Philadelphia, 1829. 2. *The Catechism of Health; or Plain and Simple Rules for the Preservation of the Health and Vigor of the Constitution from Infancy to Old Age.* p. p. 195. Philadelphia, 1831.

'HEALTH! HEALTH! HEALTH!' was the exclamation of a venerable female friend, who entered our parlor, (the appropriate place for reviewing pretty books,) at the moment when a beautiful copy of the 'Catechism of Health' was laid open for the purpose which now occupies us.

According to our fair *quintagenarian*, the last century was distinguished for producing *good health*: the present, for producing

good books on the art of health; and it was quite apparent from her manner that she preferred the former. She seemed even to doubt, whether the numerous works on Hygiene, are productive of any solid advantage to society; and more than once broadly intimated, that the tendency of the whole, is to subject to artificial rules, that which can be safely confided only to the instincts, appetites, and experience, of each individual. She insisted, that those who gave least attention to the preservation of their health, generally enjoyed it most; that man was created for objects, the industrious pursuit of which, will generally give him good health; that it is a natural, not an acquired condition; that an individual may, to be sure, have excellent health, while observing the minute and multiplied precepts of the Journal and Catechism, but it by no means follows, that he would not have been equally well, if these entertaining books had never been written; that such works, like treatises on domestic economy, can but embody the experience of the world, in reference to which each individual might safely be left to appropriate to himself, such a portion as his peculiar situation might require; finally, that to 'live, move, and have our being, beneath a written codeof hygienic laws, is to be subjected to a new dominion, in addition to those which society had already imposed.' We secretly wished for the aid of our learned friends, the Messrs. Editors and Authors, whose principles were thus assaulted, but determined to make as grave a defence as possible, when the animated assailant suddenly took her leave, and left us to reply with the pen instead of the tongue.

We admit, then, that much depends on a good natural constitution, and still more on exposure and hard labor in the open air; but all have not good constitutions, and, in civic life, the majority are placed under circumstances in no degree favorable to great bodily vigor.

The restraints imposed upon them are numberless; their whole existence is, so to speak, artificial; most of the causes, both moral and physical, which act upon them, have an unfavorable bearing; some organs are overworked, others languish in sloth; this is kept in perpetual irritation, that in stagnation

and torpor; the temptations to improper indulgences of every kind, are greatly multiplied; the appetites are bribed and pampered; the dominion of fashion is mad and tyrannical.—Hence new infirmities and diseases unknown in the country, are generated; children are born with frail constitutions; and their native tendencies to disease, await but the action of slight exciting causes, to rouse them into fatal energy.

Thus surrounded and put upon, by the enemies of health and long life, the inhabitants of populous cities, must either yield themselves up as willing victims, or study and practise the arts of defence and preservation. To aid them in these respects, is the design of the works now before us. They are far, however, from being limited, in their objects and value, to the inhabitants of cities, though most adapted to those, as by them such works are most needed.

The *Journal of Health*, published twice a month, was commenced in Philadelphia, nearly two years ago, and is ably edited, by two of the most learned and estimable physicians of that metropolis. We have too long neglected to give it a passing notice, but are happy to know, that *even* without our backwood's testimony to its merits, they have become known and acknowledged over the whole United States. Its scope is comprehensive; and, in general, the execution is such as to render it at once entertaining and useful. It abounds in pertinent extracts from writers of celebrity, both ancient and modern; and its notices of current works are given with sound judgment; while the original articles, not a few in number, are written with a degree of tact and spirit, that must ensure them, what but few of the lucubrations of the day, perhaps, receive—a perusal.

We shall extract two or three specimens at random.

BEDS.

"Many, perhaps, who rank 'the downy couch' high upon their list of indispensable comforts, will be surprised to learn that writers on the means of preserving health have, almost unanimously, included it among the means calculated to rob the system of its due degree of vigor.

In youth especially, feather beds, like every other species of luxury, by causing a premature development of the system, without strength

proportionate to the rapidity of its growth, often lay the foundation for many of those diseases by which multitudes are consigned to an early grave.

Even in persons of maturer years, by the undue degree of heat they accumulate around the body during sleep, and the profuse perspiration thence induced, in the milder seasons of the year, their tendency is to enervate the constitution, and lay it open to serious impressions from trifling degrees of cold.

A mattress, composed of some soft and elastic material, as hair or moss, ought, therefore, to be invariably preferred. The latter, with a proper amount of covering, will be found sufficiently warm for health and comfort, during even the severest nights of winter.

On a former occasion, we attempted to show the susceptibility of infants to the influence of cold; hence, it might be supposed that for them, a feather bed would be the most appropriate; and this opinion has been attempted to be supported by a reference to the instinct of animals, among which 'all that bring forth a feeble offspring, prepare a soft bed for their reception—brood them with their wings, or clasp them to their bosom for the sake of warmth.' It is certainly true, that during infancy a greater degree of warmth is at all times demanded than is necessary, or would be proper, in after life; but, as an infant should never be allowed to sleep alone, it can always be preserved of a sufficient temperature, without having recourse to the doubtful expedient of subjecting it to immersion in a bed of feathers.

Dr. Darwin has advised that young children 'should not lie on *very hard* beds, as it may occasion them to rest on too few parts at a time, which hardens these parts by pressure, and prevents their proportionate growth.' A bed, such as is here described, would most undoubtedly be improper at any period of life. There is a very material difference, however, between a soft and elastic mattress, and a bed so hard as to occasion uneasiness to the parts with which it is in contact. From sleeping on the former, even the most delicate need not be deterred, by any apprehensions of the injurious consequences to which the doctor alludes.

If ever feather beds be admissible, it is in the case of the aged, who are nearly as susceptible to the influence of cold as infants; to such, therefore, a warm bed is often a matter of indispensable comfort.

Feather pillows are not less injurious than feather beds. By preserving the head of an immoderate warmth, they are apt to induce catarrhs, and, in the young, may become the remote or exciting cause of inflammation in the ear—eruptions—pain of the head, or even more serious diseases. For the same reason, all coverings for the head at night, excepting in the instance of females who are accustomed to wear a cap during the day, are productive of bad effects. Children, therefore, of both sexes, should be accustomed from an early age, to sleep with the head bare—the covering with which nature has, in general, so plentifully supplied this portion of the body, being amply sufficient to protect it from cold.

After what has been said above, upon the injurious tendency of subjecting the body to an undue degree of heat, during the period of repose, cautions against an excess of bed clothes would appear unnecessary. It is all important that the body be covered with a sufficiency of clothing to preserve it comfortably warm; and this may be effected during health, and in individuals accustomed to exercise, by fewer blankets, coverlets, and *comfortables*, than many are accustomed to pile upon the bed.

So injurious is an excess of heat, during repose, esteemed by Dr. Beddoes, that he has advised, and with great propriety, that young persons, especially when they present symptoms of languor and debility, or complain of unrefreshing sleep, should be examined when in bed, 'and if found too warm, awakened without compunction.'—The bed clothes should then be thrown off, 'or if the dry heat of the surface be considerable,' he adds, 'it will be best to walk up and down the room, in a dress so contrived as to guard the extremities from chill, while it permits the residue of the body to be freely ventilated.' Cool rooms, mattresses, and light bed clothes, will, in all cases, prevent the necessity of having recourse to the expedient here directed.

A proper night-dress is an object of no little importance.—A loose flannel gown for winter, and one of muslin for summer, will be found the most proper, more especially for children. No part of the clothing worn during the day, ought, in fact, to be retained at night.* Whatever dress is adopted, it should be free from every species of ligature, particularly at those parts which encompass the neck or the extremities. This is an all-important caution, from a neglect of which serious injury has often resulted.

Closely shrouding a bed with curtains, is one of those numerous instances in which the requisitions of fashion are found to be opposed to health. By preventing a free circulation of the air, they oblige the individual who reposes within them, to breathe an atmosphere vitiated by repeated respiration. They become receptacles for fine particles of dust, which are liable to be inhaled during sleep, whenever disturbed by the motion of the curtains or of the bedstead: this alone, according to Willich, is a cause to which many young persons may refer the first development of a consumptive attack.

Equally pernicious is the practice of sleeping with the face enveloped in the bed clothes, as well as that most ridiculous custom, so prevalent in this country, of suspending a curtain over the front of an infant's cradle.

Their own feelings might be supposed sufficient to induce all to assume in bed, that position, in which every portion of the body will be left the freest from constraint: yet in the case of children, some cautions may be necessary, in order to prevent an awkward position from being indulged in, calculated to produce a prejudicial effect upon the symmetrical growth and perfect development of the system. Hence

* Those in particular who are accustomed to wear flannel, will find it advantageous to dispense with it whilst in bed—or to exchange it for an under-dress of cotton.

It is prudent, when young persons lie upon their backs, to reduce the size of the pillows, in order to guard against a contortion of the spine; while lying on the side requires pillows sufficiently large to fill up the space between the head and point of the shoulder. A constrained position, if it have no other bad effect, is a certain preventative to sound and refreshing sleep.

Beds should never be placed upon the floor: it is well known, that in all apartments occupied by living beings, the inferior portions of the atmosphere are always the most impure. The most wholesome situation for the bed, is in the middle of the room, and raised some feet from the floor. From the vitiated state of the atmosphere immediately above the latter, and the great importance of a free ventilation, the practice of placing the children's bed beneath another bedstead during the day, cannot be too severely reprobated."

"It is a difficult task to so lay down any general principle, and enforce it by examples in detail, that the perverse ingenuity of some cannot find omissions, which they are fain to regard as exceptions in their favor. We have repeatedly, in this Journal, entered our solemn protest against the sin of drunkenness, and pointed out with some care, the masks its votaries put on, to evade the reprobation with which the vice, in its grosser forms, is universally stamped. We have indicated the various means by which at first the health, and afterwards the disposition of children are ruined, by an early indulgence of their appetites; and reprobated the false method, devised in well-intentioned, but mischievous ignorance, of attempting to restore lost strength by domestic prescriptions, recourse to wine bitters or home-brewed liquors. Our efforts have, we are well assured, been attended with some success; and we are encouraged thereby to persevere and continue to point out the various malpractices, by which the body's health and mind's peace are slowly, but surely destroyed.

The evil to which we would now direct the attention of our readers, and entreat them to abandon or shun, as the case may be, is not confined to either sex exclusively; nor is it one for which the inconsiderateness of youth, or the infirmities of age, can be pleaded as palliation. The enjoyment which it brings is solitary, as that from dram-drinking itself, and in its consequences, if possible, still more pernicious. It is, in fact, dram-drinking on a small scale, and in a more fashionable, and, as it is thought, scientific manner. It is a concentrated poison, not jovially quaffed from the glass and the bowl amid songs, and joyous shouts; but carefully meeted out in drops by the idle and luxurious man, who has lounged away his day in listlessness at home, in place of courting occupation and enlivenment by active exercise in the open air; or by the belle, whose pallid face and sunken eye, show the exhaustion of the midnight assembly and dance. They dare not hope for, they are sure they cannot obtain, the sweet sleep which follows industrious labor and useful exertion; but they must forget themselves: the day had for them sufficient horrors, with-

out a wakeful night redoubling the store. What then, say they, remains for them to do, if not to take their accustomed number of drops of laudanum, or some equivalent stupifying solution. They who are afraid to meet the summer's heat or winter's ice—whose nerves are too feeble to bear the slight motion of a carriage, or the shortest ride on horseback—and to whom pain is dreadful even in idea, have no hesitation in thus nightly swallowing a poison, each drop of which, causelessly taken, brings with it more bodily uneasiness and mental torment, than the longest day to the lashed galley slave. They may sleep the sleep of stupefaction, or dream themselves in paradise; but when they awake, 'fear, sorrow, suspicion, discontent, cares, and weariness of life, surprise them in a moment, and they can think of nothing else: continually suspecting, no sooner are their eyes open, but this infernal plague of melancholy seizeth on them and terrifies their souls, representing some dismal object to their minds, which now, by no means or persuasions they can avoid."

However repugnant to our feelings as rational beings may be the vice of drunkenness, it is not more hurtful in its effects than the practice of taking laudanum. Disgusting and repulsive to the eyes of others, and injurious to the indulgers in it, as is the chewing of tobacco, it is not more censurable, nor so much to be dreaded in its consequences, as the habit of chewing and swallowing opium, to mitigate unpleasant feelings, or remove melancholy. Some have habitual recourse to laudanum or opium, to relieve pain and uneasiness, caused usually by the undue gratification of their appetite. Let them learn, that there is no example on record of any agent used for medicinal purposes, in particular diseases, or alarming emergencies, which has on these occasions a direct, controlling, and sanitary power, that will not, when persistently used, become noxious to the animal economy, and poison all the springs of life. It is thus with wine, alcoholic liquors, opium and laudanum, and the various tinctures and cordials of which opium is the basis: it is thus with all the vegetable bitters and mineral tonics without exception. All the powders and cordials which have been recommended for the cure of gout, have invariably, when taken for any length of time, destroyed the digestive powers, enfeebled the brain and nervous system, and often brought on dropsy, palsy, and apoplexy. A physician, after due deliberation and much counsel with himself or medical friends, will prescribe mercury, bark, opium, or perchance arsenic, for the cure of the violent and dangerous malady under which his patient is laboring at the time; and his efforts will often be crowned with success. But let this patient, of his own accord, or under the pestilential influence of domestic or empirical advice, use any of these articles for a length of time, and for one uneasy symptom, which he wished removed, ten will take its place; and his constitution will be so broken down, that even his first successful adviser and medical friend, can now be little more than a melancholy spectator of remediless decay. This is not the language of exaggeration or speculative fear. We speak from a full knowledge of the facts. We repeat it—the person who gives into

the habit for weeks, (he may not reach to months, or if he pass these, his years will be but few and miserable,) of daily measuring out to himself his drops of laudanum, or pills of opium, or the like deleterious substance, call it tincture, solution, mixture, potion, what you will, is destroying himself as surely as if he were swallowing arsenic, or had the pistol applied to his head. The fire of disease may for a while be concealed—he may smile incredulous at our prediction; but the hour of retribution will come, and the consequences will be terrible.

Besides, who are the unfortunate creatures, who, in impious despair, destroy themselves by poisoning with opium or laudanum? The very same who had long been in the practice of using it as a soother and a balm: as a means of procuring repose after the languor of idleness, or the perturbations of vice. Miserable resource from care or grief! to stupify one's self with such a drug for a few short hours, only to awake in renewed despondency, with a mind paralyzed and unfitted for the commonest duties of life. The countenance of the unhappy victims of the practice, reveals too painfully to an observant eye their condition. The expression is more haggard, and the features more distorted, than even from common drunkenness, and produce on others a mingled feeling of pity and fear. The humid lustre of the eyes is exchanged for a dull, turbid, and dejected appearance of this organ, which is sunk in its orbit, the rounded cheek, once flushed with the glow of health, is now pale or leaden, and the corners of the mouth no longer raised into ready smiles, have a downward direction, indicative of suffering, alternated with listlessness and apathy. The moral nature is not less fearfully changed than the physical All manly resolution is fled: to think is too great an effort: the sight of distress elicits childish grief, without furnishing sufficient incentive to its relief or mitigation. Not very different, in fine, is the confirmed opium-taker from the torpid animal warmed into motion by artificial heat: it twists itself about, attempts some gambols, or with impotent malice, tries to bite and annoy those near it. But in a few minutes, the stimulus of heat is gone, and it sinks once more into torpidity."

We are tempted to make another extract, from the hope of recalling the attention of the profession to the great value to invalids of horseback exercise, so rapidly falling into disuse in these days of machinery.

RIDING ON HORSEBACK.

"In some of the former numbers of this journal, we have taken notice of those species of exercise which are within the reach of almost every class of society—of the poor as well as the rich; we proceed now to the consideration of others, which, as they involve considerable expense, must necessarily be confined in our cities at least, to individuals in affluent circumstances.

First upon the list. is riding on horseback: one of the most manly, innocent, and useful kinds of exercise of which any one can partake, and by the use of which, the invalid has not unfrequently been surprised into health.

Bishop Burnet, in one of his works, expresses his surprise that the lawyers of his time, enjoyed, in general, better health, and were longer lived than individuals of other professions. Upon consideration, he was led to attribute this entirely to their being obliged to "Ride the Circuit" almost constantly, in order to attend the various courts held in the different parts of England; and which they were accustomed to do chiefly, if not entirely, upon horseback. It is certainly very reasonable to suppose that this circumstance may have had a very beneficial influence upon their health, and have aided not a little in prolonging their lives.

It has been supposed by some, that riding is a more salutary exercise, and ought to be preferred to walking. This, however, is by no means the case, under ordinary circumstances. Riding, occasionally is confessedly a very powerful aid to health; as an ordinary means of exercise, it is, however, inferior to walking—the latter being in general much better adapted to promote an equal distribution of the fluids to the different parts of the body—to impart to the fibres their due degree of elasticity, and in this manner to augment the health and strength of the whole system. In those cases, however, in which a debilitated constitution or the presence of disease prevents a sufficient amount of exercise from being enjoyed on foot, riding on horseback is to be preferred. As a general rule, it may be said, that walking is best adapted to the preservation of health—riding to the relief of chronic disease—In active diseases neither of them are advisable.

By the dyspeptic, and those predisposed to pulmonary consumption, in particular, riding on horseback is an exercise which should never, if possible, be neglected.

Though we are not prepared to assert with Sydenham, Cullen, and some other physicians, that "horse exercise is an effectual antidote to the consumption" after it has once become seated in the lungs; yet we have seen sufficient to convince us, that when, from predisposition, the disease is to be feared, or the individual already experiences its rapid approach, riding on horseback, persevered in daily for a length of time, in connection with a well regulated diet and proper clothing, is the best, perhaps the only means by which its attack can be avoided, or its further progress completely arrested, and a comfortable existence enjoyed for a series of years.

In riding for exercise, or to preserve health, eight or ten miles a day are sufficient; but for the purpose of restoring health, these little excursions will avail but little. It is not from the fashionable half hour's ride, morning and evening, in which the same ground is travelled over, for the most part, every day, and the surrounding objects cease to interest, from being too frequently presented to the view, that the invalid is to anticipate any decidedly beneficial effects. To produce these, hours must be daily spent on horseback—the mind must be free from depressing or intense reflections; and in the company of

a judicious and agreeable companion, such portions of the country should be visited, in which the novelty or beauty of the scenery is calculated to interest the mind and elevate the spirits. Long journeys have hence, with great propriety, been recommended to invalids. To such as can afford it, a ride at a proper season of the year, to some one of our remote watering places, or springs, presents a very excellent means for recruiting health. Let not the indolent and irresolute object to this latter jaunt in consequence of the distance, or the roughness of the road, over which, in many instances, they would be obliged to travel. These circumstances are to be viewed rather in a favorable than an unfavorable light. We can conceive of but little benefit that would be derived, in the way of exercise from a journey of any distance, upon a rail road, and in one of the newly invented self-propelling cars.

Against a species of passive exercise, in which many are fond of indulging, we beg leave here pointedly to protest—we allude to the practice of lounging on horseback—in other words, moving at a snail's pace, over a smooth road, with the external senses but half awake, and the mind in a state approaching to complete apathy. It is true, that the individual who practises this *gentle* kind of riding, may enjoy the benefit of the fresh air; but as to bodily exercise, he experiences even less than the child does upon his rocking horse, or the rustic in his favorite swing upon the barn-yard gate.

Exercise upon horseback should be taken, during summer, in the cooler portions of the day—in general, it is better adapted to clear weather in the more temperate seasons of the year, than to those seasons accompanied by extreme heat or intense cold."

On the whole, the Journal of Health is a work that merits the approbation of the profession, and deserves general patronage. Its learned editors have shown, that a great variety of amusing and instructive topics may be conveniently brought within its limits; and it is by this extensive association, that much of the interest which it has inspired, has been produced and sustained. It is the friend of knowledge and virtue, as well as of health; it presents many specimens, both extracted and original, of fine writing, and as a family periodical, may be ranked with the most useful of the day.

The Catechism of Health, like the Journal, is anonymous, but no one, familiar with both, can fail to perceive, that they have a common origin. The Catechism is strictly didactic, and totally divested of all references to authorities, and of every extraneous embellishment. It is, in fact, a rigid elementary and practical treatise on hygeine, in the form, as its title imports, of

questions, which, in general, are asked and answered in such manner, as to sustain the attention of the reader, and render the various subjects intelligible to the humblest capacity; while the information communicated, is of so much importance to all classes of society, not even excepting the Faculty of Physic, that we trust it will be speedily and widely disseminated. The Catechism is, indeed, a valuable family book; and should be classed with those, which children and young persons, at home or in school, should be required to study, as they study other elementary works in the various departments of human knowledge. Many have been the treatises of health with which the world has been favored or oppressed; but we know of none, in which so great a number of useful maxims are condensed into so small a space, or arranged in an order so convenient and natural. But we shall let the little book speak for itself.

FOOD.

Q. 243. When ought man to partake of food?

A. Whenever he feels a natural appetite for it.

Q. 244. What is meant by a natural appetite?

A. That inclination for food which occurs in a healthy individual accustomed to daily exercise in the open air.

Q. 245. Of what kind of food ought man to partake?

A. Of plain and wholsome food, simply cooked.

Q. 246. Ought it to consist of vegetables or the flesh of animals?

A. Of a proper mixture of both.

Q. 247. Of which should it consist principally?

A. Of Vegetables, particularly in summer, and in warm climates.

Q. 248. How much ought an individual to eat?

A. Only so much as to satisfy his natural appetite.

Q. 249. Can an individual enjoy perfect health on animal food alone?

A. He will at least enjoy less perfect health than on a proper intermixture of animal and vegetable food; or by living entirely upon the latter.

Q. 250. Is it proper to eat with haste?

A. No; every portion of the food should be fully chewed before it is swallowed.

Q. 251. If our food be not properly chewed, what is the consequence?

A. It cannot be fully digested by the stomach; hence it overloads the latter, does not yield sufficient or proper nourishment to the body, destroys the natural appetite, produces uncomfortable feelings and disease.

Q. 252. In what manner is an unnatural and inordinate appetite for food produced?

A. By partaking of a great variety of food, or, of that which is richly cooked; by rich sauces, high seasoning, and by the use of wine and stimulating drinks at meals.

Q. 253. Is not a man's health and strength always in proportion to the amount he eats?

A. No; a very moderate quantity of plain food is all that is necessary for the support of health and strength; all beyond this will injure both.

Q. 254. What are the effects produced by eating too much?

A. The powers of the stomach are impaired; the body becomes bloated, languid, and enfeebled, the spirits depressed, the mind inactive; finally the system becomes the prey of gout, dropsy, appoplexy, and other serious diseases, and the duration of life is considerably shortened.

Q. 255. What is necessary in order that wholesome food, eaten in moderation, may communicate a sufficient amount of nourishment to the system?

A. That the powers of the stomach be sufficient to its perfect digestion.

Q. 256. What are the causes by which the powers of the stomach are impaired?

A. By intemperance in eating, by drinking distilled spirits, or immoderate quantities of wine and malt liquors, by the neglect of exercise, by over fatigue, want of regular sleep, impure air, intense application of the mind, anxiety, &c.

Q. 257. How are the healthy powers of the stomach best preserved?

A. By drinking only water, by regular active exercise in the open air; by partaking of wholesome and simple food, plainly cooked; by eating only when an appetite is present, and leaving off the moment it is satisfied; by personal cleanliness; breathing a pure atmosphere, and by preserving the mind free from all corroding cares.

Q. 258. In what manner do the refinements of cookery, rich sauces and spices, become injurious?

A. They disorder the stomach, and impair the health of the system generally, by rendering the food too heating, and difficult of digestion, and by inducing us to partake of too much food, or to eat in the absence of the natural appetite.

Q. 259. Is it proper to partake of food while the body is laboring under the immediate effects of considerable fatigue?

A. Whatever food is then eaten should at least be very light, in a fluid form, and taken in moderation.

Q. 260. How many meals should an individual take in the course of the day?

A. On this subject, no rule can be laid down; the wants of the system as indicated by a healthy appetite should be the only guide as to the frequency and extent of our meals.

Q. 261. In a healthy condition of the system at what period will food be most generally required?

A. Soon after waking in the morning, and also towards the close of the day. Breakfast and an early supper would appear, therefore,

to be the most indispensible meals to an individual in health and using daily active exercise.

Q. 262. Is it proper to allow the stomach to endure for any length of time the sensation of hunger?

A. No; by so doing, its powers are always impaired.

Q. 263. Who requires the most food, the individual who devotes the greater part of the day to bodily exercise, or he who spends it in sedentary employments within doors?

A. The first will require the most food; this is indicated by a greater appetite and stronger powers of digestion which they possess.

Q. 264. In which season of the year, summer or winter, is the greatest amount of food necessary?

A. In winter. In summer the food should consist principally of vegetables, of preparations of milk and the like.

Q. 265. Is it proper to drink a great quantity at meals?

A, No; drinking a large amount of fluid at meals, impedes the digestion of the food.

Q. 266. What constitutes an important article of food in all civilized countries?

A. Bread, which has been justly styled the staff of life.

Q. 267. What are the requisites to constitute bread a wholesome food?

A. That it be made of good flour, that the dough be rendered sufficiently light before it is put in the oven, and that it be well baked, and at least one day old before it is used.

Q. 268. Is not warm or perfectly fresh bread wholesome?

A. No; it is difficult of digestion, and always disorders the stomach.

Q. 269. Is bread that has been kept too long, or in a damp place, so as to become mouldy or musty, fit to be eaten?

A. No; such bread is liable to produce very serious disease.

Q. 270. Are hot cakes made of flour kneaded with butter or lard wholesome?

A. No;—when eaten they soon produce, particularly in weak stomachs, a sense of weight and uneasiness, and what is termed heartburn.

Q. 271. Are potatoes a wholesome food?

A. When eaten with milk or with meat they are an excellent food, but they contain too little nourishment to permit the body to be supported on them alone.

Q. 272. Are very fat meats wholesome?

A. The fat of meat is always difficult of digestion, and when the individual is not very robust, it disorders the stomach to a very great extent.

Q. 273. Is tea a proper article of food?

A. Tea cannot be considered as an article of food, as it contains in itself not the least nourishment. When drank very strong or in large quantities, it undoubtedly injures the stomach and disorders the whole system.

Q. 274. Is coffee less injurious than tea?

A. From the moderate use of weak coffee, with plenty of sugar and milk, little or no injury can result; when very strong, however, or immoderately indulged in, it is predjudicial to health.

Q. 275. What effect has chocolate on health?

A. When perfectly pure, boiled in fresh milk, and drank in moderation, it is both wholesome and nourishing. The impure chocolate generally made use of, is, however, pernicious to health.

Q. 276. Is ripe fruit a wholesome article of food?

A. It is when eaten in moderation and with proper precautions.

Q. 277. What are those precautions?

A. Not to indulge in it when the stomach is loaded with other food; always to pare it or memove the external skin; and of plumbs, cherries and the like, always to reject the stones.

Q. 278. Why is it necessary to remove the skin and reject the stones of fruit?

A. Because the first being tough and indigestible, is liable to remain in the stomach for a long time, and to produce uneasiness and pain, and the latter, when swallowed, have been frequently the cause of most serious disease of the bowels, or even death.

Q. 279. Is unripe or decayed fruit unwholesome?

A. They are so in the highest degree.

Q. 280. Is fruit cooked with sugar injurious to the stomach?

A. Not when it is eaten in moderation, and the stomach is not laboring under disease.

Q. 281. Is milk a wholesome article of food?

A. Milk and all its simple preparations are among the most wholesome articles of food.

Q. 282. When we feel no appetite for food, cannot we excite one by taking bitters or cordials?

A. An artificial appetite may in this manner be excited, but the food that is then eaten, will not be perfectly digested, nor yield sufficient nourishment to the system, while the stomach is invariably injured.

Q. 283. When an individual has been so unwise as to overload the stomach with food what ought to be done?

A. He should abstain entirely for a short time from every kind of solid food, making use of a small quantity of toast water, thin gruel, or weak broth.

Q. 284. Are pie crust and the different kinds of pastry wholesome articles of food?

A. To weak stomachs and those of children they are in the highest degree injurious; to abstain entirely from their use is the wisest rule.

MEANS OF SECURING THE SYMMETRY AND BEAUTY OF THE BODY.

Q. 428. Upon what is the physical beauty of man intimately dependant?

A. Upon the health, the full development, and the perfect conformation of his body.

Q. 429. In what manner may these be secured?

A. By the means which have been already pointed out; especially by temperance, and the free and regular exercise of the body in a pure air, commenced with in early life, and persevered in daily.

Q. 430. What are the means best calculated to secure that freshness and brilliancy of the complexion, regularity of features, and vivid expression of the eyes, so essential to the beauty of the face?

A. A free and pure air; regular exercise; washing daily with water, and frequent bathing; a light, easy dress, adapted to the temperature of the season; pure water for drink, and simple wholesome food to nourish the body.

Q. 431. By what means are the full growth and symmetrical development of the body promoted?

A. By avoiding sloth and inactivity, and too much confinement within doors, or in a sedentary posture: by rejecting all such articles of dress as bind, or press upon any part of the body: by avoiding gluttony, and every species of intemperance: and in our exercises, to shun all such as call into action only a part of the body, and leave the residue in a state of rest.

Q. 432. What is particularly demanded during youth, in order to secure the full and perfect development of the body?

A. That a considerable portion of each day be spent in childish sports and gymnastic exercises.

Q. 433. What position of the body during childhood and early life is best adapted to promote its growth and beauty?

A. The erect posture, whether in standing or walking; keeping the head and breast elevated, and resting the weight of the body equally upon both legs. On all occasions, therefore, that will admit of it, the upright posture is the one which should be insisted upon, in order to prevent permanent deformity.

Q. 434. What positions of the body are especially liable to occasion permanent deformity?

A. All such positions in which the body is bent to one side, or forwards, when continued for any length of time or frequently repeated; leaning both arms or the breast upon a table, when occupied in reading or writing; an habitual negligence in the carriage of the body, either when walking, standing, or sitting; hanging down the head, or bending the neck forwards, especially when speaking, or attentively listening; looking askance at objects, &c.

Q. 435. What important cautions with respect to the bed occupied by a young person are necessary in order to prevent deformity of the body?

A. To prevent the head and shoulders from being too much elevated by a large pillar or bolster, and to have the bed of sufficient firmness to prevent the hips from sinking into it.

Q. 436. What evil results when these circumstances are not attended to?

A. The back is very apt to become permanently twisted; one of the shoulders more elevated than the other, and the neck inclined ungracefully to one side.

Q. 437. Ought young people, when two sleep together, to be allowed always to occupy the same side of the bed?

A. No: they should change sides frequently; otherwise, particularly in a feather bed, they are liable to become crooked.

Q. 438. Is the same injury liable to result from sitting always at the same side of the table, or window, while at work?

A. It is. Young people, when the position in which they sit, is not freqnently changed, acquire a practice of bending habitually to one side, from which a permanent twist of the body in that direction is to be feared.

Q. 439. Has the foolish habit which many young persons indulge in, of contorting their features, or of shrugging their shoulders and performing similar gesticulations, any permanent influence upon their physical beauty?

A. All these practices, which are in the highest degree ungraceful, when frequently indulged in, are very apt to become habitual—that is, to be repeated involuntarily: when this is the case, the manner in which they injure the beauty of the individual will be readily understood.

Q. 440. May not these practices be acquired involuntarily?

A. They may: thus when a lively and active child is kept for many hours in a room, without being allowed to vary his posture, or when he is constrained to apply himself too long at one time to his books, he becomes restless, and is very liable to acquire involuntary twitchings of the face and limbs.

Q. 441. Is the habit of squinting ever acquired by improper practices?

A. It is often acquired by proper care not being taken to accustom infants and young children in viewing objects to exercise both the eyes equally, or by allowing them habitually to view objects placed too much on one side, and not in the direct line of vision.

Q. 442. May not an improper form of the cap worn by infants, cause them to squint?

A. It is very probable that when the cap worn in infancy projects forwards beyond the head on each side, like the blinds of a coach horse, so as to make it easier for the child as he lays in his cradle to view the objects on either side of him with the eye most distant from them, that squinting will be occasioned. It is at least important that the caps here described be carefully avoided.

OF THE PASSIONS.

Q. 236. Has the proper government of the passions any connection with the preservation of health?

A. Yes, a very important one: unless the passions of the mind be kept in subjection, health invariably suffers.

Q. 237. What disposition of the mind is most conducive to health and longevity?

A. A calm, contented and cheerful disposition.

Q. 238. In what manner does the inordinate indulgence of the passions act prejudicially upon health?

A. It impairs indigestion; suspends the proper functions of the skin; injures the nervous system; disorders the circulation, either by inordinately exciting, or by depressing the action of the heart and blood vessels, and renders the body more susceptible to all the causes of disease.

Q. 239. What are the passions an indulgence in which is most prejudicial to health?

A. Anger, hatred, revenge, jealousy, fear, grief, and despair.

Q. 240. What persons are most subject to inordinate fits of anger?

A. They who are intemperate in eating and drinking; particularly such as indulge in the use of ardent spirits.

Q. 241. Has the indulgence of violent anger been known to produce immediate death?

A. It has in many instances. History furnishes us with numerous striking examples.

Q. 242. In whom is the indulgence of anger liable to be attended with the most fatal effects?

A. In those of full habits, with short, thick necks; in those labouring under disease of the heart or lungs, or who are subject to a spitting of blood, or to convulsions.

Q. 243. Has violent paroxysms of anger indulged in by nurses, any effect upon the infant to which they give suck?

A. Such a change is frequently produced in the milk by this cause, as to induce convulsions and even death in the infant, when applied to the breast during, or immediately after a violent fit of anger in the nurse.

Q. 244. Is the sudden destruction of life ever caused by excessive joy?

A. It is, though not so frequently as from violent bursts of anger.

Q 245. Has excessive fear ever been known to destroy life?

A. It has frequently caused instantaneous death; when this is not the case, it is apt to produce insanity, convulsions, or a state of fatuity.

Q. 246. What effect has extreme fear upon the hair?

A. It has been known to render it perfectly white, instantly, or in a very few hours.

Q. 247. Is not the same effect most generally produced by grief and anxiety?

A. It is, but not commonly in so short a period as by fear.

Q. 248. Does any particular mode of life increase the susceptibility of the mind to fear?

A. Yes—the susceptibility to fear is most usually increased by a luxurious and indolent mode of life; neglect of bodily exercise; or in fact, by what ever reduces the energies of the system.

Q. 249. Are there no instances, however, of persons in perfect health, and endowed with great bodily strength, being peculiarly subject to excessive fear?

A. Yes: ignorance, superstition and guilt will cause the mind to be disturbed by extreme terror from the most trifling causes, when neither the strength nor health of the body is impaired.

Q. 250. In sickly seasons, or during the prevalence of an epidemic, are persons who give way readily to fear, particularly liable to be attacked by disease?

A. Yes, even under a less degree of exposure than individuals of an opposite character. the same, however, is true of all who labor under the effects of any of the depressing passions.

Q. 251. Is the occurrence of any circumstance calculated to give the mind a sudden shock attended with danger?

A. On delicate and very sensible habits, it produces the same bad effects as excessive fear.

Q. 252. What effect has a paroxysm of any of the passions upon the appetite?

A. It will not only immediately destroy the appetite, but it will suspend also the digestive powers of the stomach, so that food taken under such circumstances will either remain unchanged or run into fermentation.

Q. 253. What influence has the inordinate indulgence of the passions upon the natural disposition to sleep?

A. It very generally suspends it. Persons laboring under the influence as well of the exciting as of the depressing passions, have been known to experience an inability to sleep for many nights.

Q. 254. Does the inordinate indulgence of the passions produce any effect upon the nutrition of the system?

A. It almost always diminishes it: hence the peevish, those laboring under sorrow, anxiety, disappointment, or whose minds are the seat of jealousy, hatred, or remorse, very generally become emaciated.

Q. 255. Is joy, when moderately indulged in, prejudicial to health?

A. On the contrary, it increases digestion, promotes the circulation of the blood, facilitates the healthy action of the skin, and acts as a beneficial stimulous upon the brain and whole nervous system.

Q. 256. Has the indulgence of hope any beneficial effect?

A. The anticipation of future good, or of some favorable change, when moderately indulged in, produces the same beneficial effects as moderate joy: but irrational, ungrounded, or misplaced hopes, on the other hand, are productive of injury, which is increased by the severe disappointment and chagrin to which their ultimate failure sooner or later gives rise.

Q. 257. Have not the hopes of a happy immortality the power of increasing our health and longevity?

A. There can be little doubt that the state of mind caused by the possession of such hopes acts beneficially upon the health, and may even prolong our days.

Q. 258. Is the studious cultivation of a kind and virtuous disposition influencial in promoting health?

A. It is in a very high degree. The fact cannot be too strongly impressed upon the mind of youth, that between vice and disease there exists an intimate connexion.

Q. 259. Is the indulgence of ambition injurious to the system?

A. Ambition, governed by discretion and directed to commendable objects, has a beneficial influence upon the system; but when inordinate, or tending to improper or unworthy ends, its effects are in the highest degree prejudicial.

Q. 260. When individuals are attacked with disease, in whom is the danger always the greatest?

A. In those whose minds are in a constant state of perturbation from the indulgence of passion, or are depressed by fear, grief, anxiety, remorse, or disappointment.

Q. 261. Are not such individuals, likewise, those most subject to diseases of the mind, and to the loss of reason?

A. It is unquestionably the case that in such nearly all the diseases of the mind, including mania, are of more frequent occurrence than in those whose passions are less active, or kept more perfectly under the control of reason.

Q. 262. In what manner does intense grief prove prejudicial to health?

A. By depressing the action of the brain and nerves, destroying the appetite, impairing digestion, and rendering defective the nutrition of the body.

Q. 263. While the state of the mind has so powerful an influence over the health of the system, is the mind in any degree affected by the state of the body?

A. The influence is reciprocal: a slight disturbance of the stomach from too much or indigestible food is sufficient often to render the temper irritable and peevish, or discontented with every thing to which its attention is directed.

CONCLUSION.

Q. 264. From the preceding view of the causes by which the health and vigor of the system are promoted or impaired, what general conclusion is to be drawn?

A. That they who owe their birth and education to healthy, well informed, and industrious parents; they who from their earliest infancy have constantly breathed a pure, fresh, and dry air, and have been allowed the free and natural motion of their limbs in daily exercise; they whose persons and apparel are always preserved strictly clean; who in regard to their meals observe moderation, order and simplicity, and drink nothing but pure water; they whose habitations are orderly, clean, dry, and well ventilated; they who have been accustomed from their youth to order, assiduity and industry; whose reason and virtue have been fortified and improved by early instruction and example; and who have been taught to fear God, love mankind, and do justice to all; they and they alone can enjoy continued health and happiness, and have a well grounded hope of prolonging their mental and physical powers to the latest period. D.

ART. IX. THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA. *Published by authority of the National Medical Convention, held at Washington, A. D.*, 1830. *Philadelphia: John Grigg*, 1831. p. 268, Oct.

THAT every civilized country in which medical science is cultivated, should have a standard authority, in the shape of a Pharmacopœia, seems now to be universally conceded, and although the faculty in the United States have been slow to imitate the example of other countries in relation to this matter, we have ample reason to believe, that this department of medical literature will hereafter be duly appreciated.

It is matter of grief, however, that any circumstances should have occurred, calculated to produce the least diversity of opinion or practice, in relation to a book, which, from its very title, ought to possess an uniform influence. We are sorry to witness any thing like collision in an affair, which should, of all others, be harmonious in its operations. A national work, for national benefit, should have the honor of the nation as one of the strongest incentives to its formation, and all local jealousies should vanish and be forgotten. Never can the medical profession in this country, nor in any other, rise in importance and in true dignity, until all its members, individually agree to sacrifice something for the good of the whole. Local prejudices, and narrow minded, sectarian views must be laid aside, and our watchword must ever be *union*, and *honorable emulation*. Our reference is now, specially, to a work recently issued from the press of New-York, and purporting to be the long-looked for National Pharmacopœia. We have only to say, in respect of that production, that it bears internal, as well as external evidence, whatever its authors may think of it, that it is *not* such a work, as the wants of the country demanded. We are perfectly willing to submit it, however, as well as the book now under brief review, to the consideration and final decision of the public.

It is not our intention to examine, in detail, the work before us; our principal aim being to call the attention of the medical

profession to it, and through that medium, to prevail upon our apothecaries, to give it a fair and impartial examination.

There are parts to which, as individuals, we feel disposed to take exception; but we are not inclined to insist on our peculiar views, as a ground of objection, to what, on the whole, we regard as the best production of the sort, which has ever met our eye. Of some articles introduced into the Pharmacopœia, we should say, that the book and the profession would be better without them; and of one or two others, that more felicitous modes of pharmaceutical management might have been detailed. In the present state of things, we are of opinion, that the fewer public objections, especially, if they be trivial in their nature, the better for the final result. Let us accept of the offering as it is presented to us, and by a repeated examination, ascertain all its weak parts, and a suitable period will arrive, in which to avail ourselves of the best application of the result of our researches. The revision of the national work once in ten years, is a circumstance which offers every inducement that can be desired, to analyze thoroughly and carefully the whole system, and to suggest whether changes may be regarded as important or necessary. We are not ignorant of the difficulties attendant on the formation of a National Pharmacopœia, and not only here, but in foreign countries; and we know, that not a work of this sort has ever yet been sent from the press, that did not excite, whether justly or unjustly we care not, the sneers of some, the sarcasm of others, and the approbation of a goodly number.

Our desire, frankly expressed, is, that the book may find entrance into every medical library, and into every apothecary's shop in our country. We are moved to the expression of this desire by two reasons; the first is, that the attention of all who, are interested, professionally, in the perfection of such a work, may be excited and deeply concentrated in it, and the other is, that a most indefatigable and worthy publisher may receive, in some measure, the patronage he so richly merits.

We cannot dismiss the book before us, without hazarding in a future edition, one of our peculiarities, at least. The days in

which we live, are somewhat revolutionary in their character, and the signs of the times indicate, that a period is approaching, in which it will be fashionable to practice medicine, without incurring the sin of promoting intemperance. We firmly believe, that spirituous potations are not essential to the cure of disease, and therefore that tinctures need no longer to have a conspicuous place in our pharmaceutical systems. If one physician can practice, unaided by the powers of alcohol, it is not assuming too much to aver, that the entire profession could, if they chose, dispense with that article, as an internal medicine. And we think, that a greater degree of responsibility rests on our profession in respect to the temperance reformation, than on any other class in the community; and that the duty we owe the public, can be most efficiently discharged, by affixing the seal of entire abstinence on our national Pharmacopœia.

ART. X.—*A Dissertation on the Remote and Proximate Causes of Phthisis Pulmonalis*—to which the Prize was adjudged for the year 1825, by the New-York State Medical Society. By ANDREW HAMMERSLY, M. D. New-York, Bliss and White, 1827.

We are led to notice the work now before us, not less by the merits of the essay and the importance of the subject, than by a wish to lead the attention of our readers to the efforts of native genius, and to direct them to the occasion which led to this publication, as an arrangement calculated to exert a very beneficial influence upon the profession.

The certain fatality which attends this disease, and the frequency of its occurrence, renders it a subject of peculiar interest. Its occurrence also is more frequent as population advances, and society increases in wealth and refinement. By an examination of the London bills of mortality, Dr. Willan has ascertained, that both the absolute and the relative mortality from consumption, has increased during the last century, though

its relative proportion seems to have been considerably less at the commencement of that period, than it was fifty years before. There is reason to believe, according to Dr. Willan, that the general mortality of Great Britain has for many years been declining, but in the mean time, as the proportionate number of deaths has been declining, it admits of a question, whether the mortality arising from this cause, has not kept pace with the increase of the population.

From some of the printed lists of mortality in the town of Portsmouth, collected by Dr. Spalding, from 1802 to 1811, a period of eight years, it appears, that of 938 deaths, 199 were from consumption. Dr. S. has proved, that as great a degree of mortality arises from consumption, in the New-England states, as from malignant fevers in the Carolinas and Georgia. In London, between four and five thousand persons die annually of this disease; and throughout Great Britain, it is asserted by Woolcomb, as the result of well-founded calculation, not less than 50,000. It is to be borne in mind, however, that in consequence of the loose method of making out bills of mortality, many cases are here reported as cases of consumption, which the more accurate modern nosology, would reject as cases of ulceration of the lungs and alteration of their texture, in consequence of repeated catarrhs and pneumonic inflammation.

After some general remarks on the frequency and fatality of the disease, the author goes on to inquire into its remote and exciting causes The exciting causes are tubercles in the lungs—the predisposing, whatever tends to the development of these. The remote causes the author divides again into those which stand connected with general atmospheric conditions, and those which depend upon individual circumstances—occupation—mode of life—constitutional predisposition.

The author remarks, that those countries which are noted for sudden and violent changes of weather, are most subject to the various grades of catarrhal affection, and confirmed consumption. To this cause of pulmonary disease, the inhabitants of the northern parts of the United States are peculiarly exposed. Beside the variableness of the climate, the extremes

of heat and cold in the United States, are much greater than in the corresponding latitudes in Europe—both the heat in summer and the cold in winter, being greater. Thus from a table furnished by Mr. Volney, it appears that the difference throughout the year, at Salem, is 119 degrees, while at Rome it is only 54, at Marseilles, 65, and at Padua, 87.

Certain cases in the animal economy tend to render the system more susceptible to these atmospheric causes of disease. The injury, therefore, is not proportionate to the difference between the heat of the system and the cold to which it is exposed.

"The state of the body in relation to its susceptibility of being affected by cold media, has more reference to the *kind* than degree of previously existing heat, or, more correctly speaking, although an equal quantity of actual heat may be present in the system, such heat may be abstracted with greater or less facility and safety, according to the mode in which it has been generated.

The increase of temperature, occasioned by what is termed an inflammatory action pervaving the whole system, such as is sometimes observed in inflammation of the lungs; that attended with an extremely debilitated state of the vital power, as in instances of what has been improperly termed putrid fever; the heat consequent upon violent exercise; and that produced by communication from without, as in the the example of hot baths, or exposures to other sources of great heat, while the body continues inactive, are all essentially different in their nature, and although in each case the quantity may be equal, and a thermometer applied to any part of the body's surface shall indicate the same; yet from such temperature alone, it would be improper to form a judgment, on the expediency and safety of the sudden application of cold."

In many cases, the injury would appear to rise, not from the "sudden abstraction of caloric, but from the precipitated interruption of those *actions* by which the increase of temperature had been generated;" and we think, (notwithstanding the reasoning of our author,) of those actions intended to prevent the undue accumulation of heat.

His remarks on the other predisposing causes connected with occupation and habits of life, we must necessarily pass over. We cannot, however, omit inserting the following letter from Dr. Cogan, to Dr. Beddoes, containing some remarks upon the

influence the domestic economy of the Dutch may have over their liability to catarrhal complaints.

"Speaking of the mode of warming their appartments, he thus remarks—"Five or six turfs, about the shape and size of our bricks, which is the usual fuel of the country, are arranged in the form of a chimney, and a glowing coal placed at the top, by which means the inward surfaces are enkindled, and the turfs are half consumed before any share of a very moderate heat is received in the apartment. The females never approach the fire, but generally place themselves at the greatest distance, contented with a small coal of the turf completely charred in an earthen pot, filled with ashes, to moderate the heat. This is placed in a wooden box, with a perforated surface, and applied to the feet.

"Supported by this consolation, they prefer placing themselves at the greatest distance from the fire, generally by the windows, which by the way, from their immense size, greatly contribute to the coolness of the rooms. In short, by the extreme airiness of their rooms, and the warmth of their dress, they are secured against those extremes of heat and cold, to which the inhabitants of those countries are hourly exposed during the winter season. Their customs are as direct contrary to ours, it being customary among us to dress as lightly as possible, and render our apartments as warm as possible, by the united aid of large coal fires, double doors, warm carpets, and ceiled rooms, and by every caution that can prevent the external air from entering at chinks and crevices, to restore the balance of circulation. This contrariety in the mode of living, in these two essential articles of dress and habitation, will fully explain, my dear sir, the cause of the frequency of catarrhs in this country, and their being comparatively seldom in Holland, without imputing it, exclusively, or principally, as some have done, to the general variableness of our climate. The transitions from heat to cold in Holland, are fully as frequent as in England, and the extremes of heat and cold are generally greater; but their effects upon the constitution are by no means so immoderate or violent. Thus, I fear, that the opprobrium that has been cast upon the climate of England, rather belongs to the injudicious conduct of its inhabitants. It has been remarked, that as luxury increases in Holland, respecting the greater comfort and accommodations of their apartments, they are becoming more subject to catarrhs."

It is unnecessary to follow the author through his detail of the opinion of nosologists respecting this disease. In this, as in many other instances, the errors of our ancestors have no claim to the prominent station which almost all writers think themselves bound to assign them. The author has adopted the

views of Laennec, and embodied his opinion of the disease in the following propositions:

"1st. Phthisis pulmonalis has claims to be considered as an idiopathic disease. 2d. The previous existence of inflammatory symptoms, is not necessary to the developement of phthisis pulmonalis, but that such as are characteristic of irritation, existing in a greater or less degree, do commonly occur. 3d. Tuberculous formations are the real proximate cause of this disease.'

Under the first of these heads, in combatting the opinion of Dr. Cullen, that this disease is a sequel of hemoptysis, Dr. H. makes the following just remark. Constitutional irritability is a forerunner of both phthisis and hemoptysis, but in the former it arises from the weak condition of the lymphatic tissue, while in the latter it arises from, or is connected with the general rapidity of the circulation. The pulse also in the former, invariably rapid, wants the tension and fulness which attends the latter in its forming stage, and the debility which attends its latter stages.

The question relating to the previous existence of inflammation, is supposed to be intimately connected with that of its scrofulous origin. Many have been unwilling to assign the character to phthisis, from the difficulty of detecting lymphatics or glands in the lungs. But if there were no difference of opinion among anatomists upon this subject, and we were prepared to give up the glandular structure of the lungs, still the general habit of the subjects of tubercular consumption, and the analogy between the tubercles in the different stages of their progress, and other scrofulous affections, would sufficiently establish this question. In addition to this, the author remarks, that the disease is most prevalent under those circumstances which are particularly favorable to scrofula. Admitting this analogy, we will be prepared still further to concede, that as scrofula frequently occurs without previous inflammation, tubercles may in like manner be formed. This view is strengthened by their simultaneous appearance in different parts of the body, where no inflammatory symptoms whatever have been observed. The fact, in our estimation, appears to be, that both scrofulous and

tuberculous engorgements, in their forming stage, imply the very opposite of inflammation; and that when fully formed, a degree of irritation so slight as to pass unnoticed, is sufficient to bring on the stage of ulceration.

While we do not deny that consumption may follow, as the consequence of abscess, produced by pneumonia, we believe it very rarely appears in that way, and concur, fully, in the sentiments advanced by Dr. H., in the following quotation:

"We do not hesitate to declare it, as our unreserved and candid opinion, that, in many instances, the medical adviser will forewarn, very seriously, those concerned in the welfare of his patient, of the danger of approaching consumption, unless the severity of present symptoms should subside; when lo! the enemy has already entered the frail fabric of his victim, and is probably too firmly entrenched to be dislodged by the combined powers of skill and experience. But, perhaps, he has waited for the developement of inflammatory symptoms, and stands ready, with lancet in hand, to meet their indications; if so, we fear he has often sacrificed the lives of those committed to his trust, in compliance with the dogmas of an insecure faith, or the prejudice of long cherished opinions. Had he exchanged the maxims of the closet for the benefit of personal examination, and made his own deceased patients the subject of his instruction, he would often have found the tuberculous lung, without any of the appearances which denote previous inflammation, and been taught a lesson of lasting utility. The error of such writers as have made consumption a constant sequel of pneumonia, will we imagine, be sufficiently apparent, from what we have advanced on this topic. Those who have gone so far as to deem preumonia the proximate cause of the disease, thereby disregarding the important influence of the tuberculous formations, have most certainly mistaken the true theory of the subject."

We cannot better conclude this article than by giving the following extract from Laennec, whose patient and laborious investigations have done more to advance our knowledge of the pathology of this disease, than the speculations of all the writers that have preceded him. Speaking of tubercles, he says:

"Those bodies, when first observable in the substance of the lungs, have the appearance of small transparent grains, greyish or colorless, and varying from the size of a millet seed, to that of a hemp seed. In this their first state, they may be called *miliary* tubercles. These gradually increase in size, and become yellowish and opaque, at first in the centre, and, successively, throughout their whole substance. In their progressive and natural increase, several unite together, so

as to form larger masses of the same kind, which, like the individual ones, are of a pale yellow opaque, and of the consistence of very firm cheese. In this stage, they may be named *crude* or *immature* tubercles. It is in this stage of their progress, that the substance of the lungs, which had been hitherto healthy, begins now to grow hard, greyish, and semi-transparent round the tubercles, by means of a fresh production, and seeming infiltration of tuberculous matter in its first or transparent stage into the pulmonary tissue. It also sometimes happens, that considerable portions of pulmonary tissue put on this character without any previous developement of individual tubercles. Parts so affected are dense, humid, quite impermeable to air, and exhibit, when cut into, a smooth and polished surface. Gradually there are developed in these comparatively solid and pelucid masses, an infinity of very minute, yellowish, opaque points, which, increasing in size and number, at length convert the whole diseased space into a tuberculous mass, of the kind named crude, or immature. In whatever mode the tubercles have first shown themselves, they at length, after a very uncertain period, become first softened, and finally liquefied. This change of consistence commences in the centre, and progressively approaches the circumference. In this stage the tuberculous matter is of two different kinds in appearance, the one resembling thick pus, but without smell, and yellower than the immature tubercle; the other a mixed fluid, one portion of it being very liquid, more or less transparent and colorless, less tinged with blood, and the other portion opaque, of a caseous consistence, soft and friable. In this last condition, which is chiefly observable in strumous subjects, the fluid perfectly resembles whey, having smaller portions of curd floating in it. When the softening of the tuberculous mass is completed, this finds its way into some of the neighboring bronchial tubes, and as the opening is smaller than the diseased cavity, both it and the latter remain of necessity fistulous, even after the complete evacuation of the tuberculous matter. It is extremely rare to find only one such excavation in the tuberculous lung. Most commonly, the cavity is surrounded by tubercles in different stages of their progress, which, as they successively soften, discharge their contents into it, and thus gradually form those irregular and continuous excavations so frequently observable, and which sometimes extend from one extremity of the lungs to the other.." "The above is the ordinary mode in which tubercles are developed; but there are two other modes, which, although mere varieties of the former, are yet deserving notice. The one is, where, in a lung containing tubercles in different stages, we find small portions of the pulmonary tissue, seemingly infiltrated by a gelatinous-looking matter, of a consistence intermediate between liquid and solid, transparent, and of a light greyish or sanguineous hue. In these diseased portions, the cellular structure of the lung is quite destroyed, but we can perceive in them a multitude of very small points, of a yellowish white color, and opaque, and which are evidently portions of the tuburculous matter, which has reached the second stage of its progress, without there being any surrounding portions of the greyish substance, which denotes the first stage.

The second mode of anomalous development of tubercles, appears likewise to take place, without any previous formation of gray matter; at least, if there be such, the transition from it to the second stage is so rapid, that I have never been able to detect its presence. In this variety, we find here and there, in the lung, tuberculous masses of a yellowish-white color, much paler, less clear, and differing less from the substance of the lung, than the ordinary immature tubercle. These masses are irregular, angular and have scarcely ever the rounded forms of ordinary tubercles. They seem, like the variety described in the preceding paragraph, and like the diffused, gray matter, noticed before, to be an infiltration of tuberculous matter into the pulmonary tissue, while the proper, or rounded tubercles, are foreign bodies, which separate or press it aside, rather than penetrate it. These masses may, therefore, properly enough be named, tubercular infiltration of the lungs. They occupy sometimes a considerable portion of one lobe. When they reach the surface, they occasion no prominence on the part, nor in any degree alter its form. As they increase, they assume the yellow color of the tubercles, and terminate by softening in the same manner. These three varieties of tuberculous degeneration are often found in the same lung. Sometimes I have found this last variety alone, in lungs affected with peripneumony, and this even in the hepatised portions. In these cases, the small number and extent of the diseased masses, and their deep pale color, showed their formation to be recent."

MISCELLANEOUS INTELLIGENCE.

ANALECTIC, ANALYTICAL, AND ORIGINAL.

I. ANALECTIC.

1. *Experiments on Pulmonary Absorption and Exhalation.*—M. Collard de Martigny, has published in the 'Journal Complementaire,' for May and August last, an account of some interesting set of experiments, undertaken for the purpose of determining some of the disputed points in the chemical physiology of respiration. Not having received that journal, we are indebted to the Edinburgh Medical and Surgical Journal, for a summary of his principal results. They are the following:

1. According to the doctrine of Lagrange, which is a modification of the original theory of Lavoisier, oxygen gas is absorbed *in substance* by the venous blood, in passing through the lungs, and does not unite with oxygen to form carbonic acid, till it has proceeded with the arterial blood to the capillaries. This opinion rests merely on some imperfect experiments by Girtanner, who thought he discovered oxygen in arterial blood. It is singular that these experiments should not have been repeated till now, as they obviously, if correct, lead to a very precise and important conclusion. On trying them, M. Collard de Martigny procured results decidedly negative. Having filled a tube, thirty-six inches long, with mercury, and reversed it so as to produce a barometric vacuum, he admitted about an inch of fresh arterial blood, from the crural artery of a living dog, and left the apparatus at rest for an hour and a half. At this time, the mercury having descended considerably, the gas which had been developed, was transferred into a graduated tube, and acted on by caustic potass, The whole of it was entirely absorbed, and consequently consisted of carbonic acid only.

2. The more prevalent doctrine at present is, that the oxygen which is absorbed by the blood in its passage through the lungs, *unites with* the blood; that carbonic acid is formed in the capillaries by the various processes of nutrition and secretion; and that the carbonic acid thus formed, is given off in the lungs, by a process of exhalation and

secretion, independently of the presence of oxygen. This doctrine rests mainly on an experiment first performed by Girtanner, and afterwards more carefully by Edwards—where a frog, being made to breathe hydrogen alone, gave off, nevertheless, more than its own bulk of carbonic acid, in the course of a few hours. This result, if the mode of experimenting is free from fallacy, is decisive of the question. It proves, that the carbonic acid given off during respiration, is not formed in the lungs by the union of oxygen with the carbon of the venous blood in its passage through the pulmonary circulation, but arrives with the venous blood in the lungs ready-formed, and is, in short, the product of the various functions of the capillaries. But M. Collard D. Martigny considers, that even the method of experimenting pursued by Dr. Edwards, is liable to fallacy. On the one hand, hydrogen and carbonic acid are so different in density, that they mingle slowly, and in consequence, an analysis of a portion of the mixture does not represent the composition of the whole mass. And on the other hand, according to a law in physics, the tissues of the body, being impregnated with carbonic acid, must give out that gas when immersed in an atmosphere of any other gas. To obviate the former fallacy, he substituted azote for hydrogen; and to do away as much as possible with the latter, he withdrew and analyzed the air in which the animal was confined, once every hour or every two hours, and replaced it by pure azote—so that in this way he could ascertain whether carbonic acid was given out only at first, and therefore arose merely from the displacement of the gas diffused through the textures, or continued throughout the whole duration of the experiment, and consequently arose from the secretion of the gas by the lungs. In every experiment, he found carbonic acid given out in considerable quantity, as Edwards also invariably remarked. In an interval, varying from seven and a half to nine hours, he procured, in seven different experiments, from 2 1-2 to 2 3-4 centilitres, or between 1 1-2 and 1 3-4 cubic inch of carbonic acid. In every instance he found nearly twice as much gas formed during the first period, as during any subsequent period, which he attributes to the displacement of carbonic acid in the textures by the azote. But after the first period, the quantity formed in every equal period of time, was nearly the same, till the animal began to become torpid and the respiration to languish, when the formation of carbonic acid rapidly decreased. Hence he concludes, that after the first period, the carbonic acid is derived solely from the blood in the lungs.

The exhalation of carbonic acid from the lungs, then, is independent of oxygen being supplied to it. The presumption must consequently be, that it is secreted or excreted by the blood in the lungs. But in order to establish this doctrine satisfactorily, it is necessary to show that the blood in passing through the lungs, really loses carbonic acid—a point which no one before M. Collard de Martigny has endeavored to ascertain. He has proved it, however, as he conceives, by a comparative examination of the arterial and venous blood of the same animal. When each was collected directly from the blood vessels in a

barometric vacuum, as formerly described, he found that venous blood almost always gave out twice, and on one occasion, thrice as much carbonic acid as the arterial blood. But when respiration was suspended by exhausting the lungs, and tying the trachea, the arterial blood was found to contain as much carbonic acid as the blood in the veins.

3. Physiologists have differed with one another as to the question, whether the carbonic acid gas given out in the lungs is equivalent to the oxygen absorbed by them; but, on the whole, the prevailing opinion is, that more oxygen is absorbed than is accounted for by the carbonic acid exhaled. M. Collard de Martigny arrives at the same conclusion by a series of experiments, apparently more free from fallacy than any previously made. The chief difficulty is to avoid the fallacy arising from the probability of the air in the lungs of the animal at the beginning of the experiment not corresponding in quantity with what remains at the end. The author got rid, as he conceives, of this difficulty, by not confining the animal in the jar of air to be breathed, but by fixing a tube in its trachea, exhausting the air in its lungs, then establishing a communication by means of the tube between the lungs and the jar, and, at the end of the experiment, expelling the residual air of the lungs into the jar by strong pressure of the chest. He has related the particulars of nine experiments of this kind, of which eight were performed with the rabbit, and one with the Guinea-pig. In four of them, the quantity of air breathed was four *litres*, or 244 English cubic inches; in four others, it was three *litres* and a half, or 213 cubic inches, in one it was 183 cubic inches; and the duration of the experiment varied from nine to fifteen minutes. In the largest quantity of air, the quantity of oxygen was 51.2 cubic inches. Of this there remained unaccounted for by the residue of oxygen, together with the carbonic acid evolved, 6.5, 16.3, 16.9, and 16.9 cubic inches in four different experiments. In the four experiments with 213 cubic inches of air, the total oxygen being 44.8 cubic inches, there remained unaccounted for, in like manner, 2.3, 4.7, 7.1, 10.4, and 18.4 cubic inches. In the experiment with 183 cubic inches, where the oxygen was 38-4, the quantity unaccounted for was 4.7 cubic inches.* In all these experiments, then, it is clear, that a large, though variable quantity of oxygen gas disappears—a larger quantity is absorbed than is given off in the form of carbonic acid. But we must observe that

*The particulars are contained in the following tables, which are carefully calculated from the original tables of the author.

Oxygen in Air before Respiration.	Oxygen remaining.	Carbonic Acid.	Oxygen disappeared.
1. 51.2	22	12.3	16.9
2.	27.1	17.6	6.5
3.	22.6	11.8	16.9
4.	20.3	14.6	16 3
5. 448.	17.4	17.0	10.4
6.	14.4	12.0	18 4
7.	19.7	22.7	2.3
8.	18.7	19.0	7.1
9. 38.4	15.3	18.4	4.7

M. Collard de Martigny commits a serious oversight in supposing that his method of experimenting is free of fallacy, or represents natural respiration. On the contrary, after the first inspiration, the animal breathes an atmosphere considerably impregnated with carbonic acid gas; consequently the blood absorbs the gas, which it is very well known to do when a moderate proportion of carbonic acid in the air is presented to it; and in this way the apparent disappearance of oxygen may be sufficiently accounted for.

4. Another point of dispute among physiologists who have occupied themselves with this subject, is whether any azote is given off or absorbed. On the whole, the greater number of authorities unite in finding that a small quantity is given off. But of late, much confidence has been reposed in the experiments of Dr. Edwards, who found that azote is sometimes absorbed, and sometimes given off, according to the season of the year. M. Collard de Martigny is at variance, however, with Dr. Edwards on this point, having invariably found in many trials at different seasons that a small quantity of azote is given off. In the experiments formerly mentioned to determine the proportion of oxygen which disappears in respiration, he found in four trials with 244 cubic inches of air, that azote was exhaled to the amount of 1.9, 1.8, 1.6, and 0.1, cubic inch; in four trials with 213 cubic inches, the quntity exhaled was 4.1, 3.6, 1.8, and 1.3 cubic inches; and in one trial with 183 cubic inches, the quantity was 4 cubic inches.

5. Lastly, M. Collard de Martigany considers the question, whether any water is formed in the lungs by the union of the oxygen of the air with the hydrogen of the blood. The idea that water is so formed has been, we believe, universally abandoned in Britain for some time, and we were not aware that this branch of the Lavoisierian doctrine of respiration still met with its favourers in France. It may be at the same time true, as our author states, that it is a notion more easily rejected than disproved. The objection first urged against it, that hydrogen never unites with oxygen at so low a temperature as 100 degrees, was met with the rejoinder, that such union readily occurs when the hydrogen is in a *nascent* state. But M. Collard de Martigny objects, that according to his own experiments, and those of M. Chevallier, hydrogen is never in a nascent state brought in contact with azote without amonia being formed, which he has never found in the halitus of the respiration. Another objection is, that whether common air or azote be respired, the quantity of halitus formed is pretty nearly the same.

In a paper which will appear presently, the author of the present essay undertakes to prove that *animal heat is altogether independent of respiration.*

2. *Observations on the influence of imperfect supplies of fresh air, long continued, on the general health.*—By William Watson, Esq., Surgeon, Wanlockhead.—From the experiments of Lavoisier, Davy, Allen and Pepys, and Dr. W. F. Edwards. we learn, that air, containing a certain proportion of oxygen gas

is indispensable to effect the requisite changes on the blood of the pulmonary artery; that in the course of successive respirations, the oxygen gradually diminishes, and that its place is supplied by variable proportions of carbonic acid gas; and that, in consequence of these changes in the air respired, frequent fresh supplies are requisite. It was also ascertained by Allen and Pepys, that when an animal breathes the same quantity of air without change, death ensues before all the oxygen disappears; and that when the same portion of air is respired until it can no longer effect the requisite changes, it still contains only 10 per cent. of carbonic acid.

In all the experiments of these observers, the animals were made to respire an atmosphere which was gradually becoming vitiated, until insensibility or fatal *asphyxia* took place; and no attention was paid to the question, how far an atmosphere not frequently changed is capable of supporting life, and what influence such an atmosphere exercises on the functions and health of the animal body?

This question, I think, may be illustrated, if not determined, by the situation of miners, who are under the necessity of following their avocations in places so remote from the general mass of the atmosphere as to be almost insulated; and where, of course, there is neither a regular ingress of atmospheric air, nor egress of the substance formed during respiration and combustion. In these places the air is so rapidly inhaled, that a considerable diminution of the quantity of oxygen must follow, and its place being supplied by an equal quantity of carbonic acid gas, the bulk remains unaltered. The carbonic acid, however, from its specific gravity, falls to the bottom of the mine, where its presence is indicated by a candle burning more obscurely than when placed at a greater height.

But carbonic acid is scarcely ever accumulated in such quantities as to effect the action of breathing, except in so far as that is connected with the process of oxidation and assimilation, and then its effects are very material; since all the nutritive particles, before they can be assimilated with the blood, must be submitted to the action of the atmosphere, through the medium of the lungs. "In this way," to use the words of one of our ablest philosophers, "respiration may be said to be carried into every part of the body." Since, then, a certain proportion of oxygen is so necessary for the due support of the animal system, and since it has been demonstrated by satisfactory experiments, that a medium, consisting entirely of oxygen, would excite the action of all the vital functions to such a degree as even to cause the extinction of life, it seems a natural inference, that the inhalation of a medium, deprived of a part of its oxygen, should be attended with very different results—namely, a loss of tone, or debility in proportion to the quantity inhaled.

That this is really the case, is not only proved by the experiments above alluded to, but all the observations which I have made during a considerable number of years tend to strengthen my conviction of its truth.

In the year 1823, sixteen men were employed, during four months, in a mine where the deficiency of air was so considerable, that a candle would not burn for any length of time, except when the wick was made so open as to allow the greatest possible quantity of air to come in contact with the ignited part. The candle was placed generally in a sloping position. Notwithstanding the deficiency of air, none of the miners had any inflammatory complaints, but all complained of lassitude, debility, and drowsiness, particularly towards the end of each day's work, sixteen hours; and they all became gradually paler in complexion.

In 1824, a number of men were employed in the same mine, with nearly the same result. Thirteen were quite free from any particular complaint,—one complained, for a few weeks, of a slight pain in the stomach,—the other two, for a few days, of pain in different parts of the body from obstructed perspiration.

In 1825, sixteen men were employed five months in a mine where the quantity of air was still smaller than in the former—still the miners were free from any particular complaint. Only one complained of shifting pain, from improper exposure when perspiring freely. In 1827, the same number of men were employed in the same mine for four months, and all remained free from complaint. Reasoning, then, from analogy, it seems fair to conclude, that a person placed in a medium where there is considerable deficiency of oxygen, must become less liable to inflammatory action, and that this non-liability will be in direct ratio to the length of time he is confined in such medium. At least, this is no speculation founded on mere conjecture, but supported, in my opinion, by the facts which have come under my own observation. From these, I draw the following inferences:—1st, That miners are not more liable to inflammatory complaints than any other class of the community. 2dly, That a majority of them, at least, in this district, remain free from any particular affection of the chest. 3dly, That hydrothorax among miners, is rather a rare disease, only two cases having occurred to me in the course of fifteen year's practice. With regard to the first of these conclusions, I may merely mention, that a majority of the inflammatory affections which have come under my notice, arose from exposure to sudden vicissitudes of weather, as in the case of engine-keepers, lead-washers, carters, &c.; and as to the second,—of sixteen miners, each sixty years of age or upwards, and still connected with the work, four have been invalided; while the other twelve continue to follow their occupations as usual. The united ages of the miners amount to 329.

I may also observe, that from a professional observation of fifteen years in this mining village, I have been led to the conclusion, that phthisis is not more prevalent among the miners here, than among any other description of people who are constantly inhaling pure atmospheric air.

As a proof of this, during the above-mentioned period, cases have occurred as frequently among females as among males; and even of the latter, there were several individuals who had never been em-

ployed in the mines at all—so that, with reference to this disease, the balance seems to be in favor of mining as an occupation; the deaths having been, according to my computation, in the proportion of six miners to nine others. I infer from this, also, that the effect generally attributed to the inhalation of noxious vapor and fine mechanical particles, namely, the irritation of the mucous membrane of the bronchia, and the inflammation thereby induced, has been much overrated; and that the conclusions drawn from this supposed effect are founded rather on analogy than on experiment or observation. The idea that fine mechanical particles may be suspended in the atmosphere, and, being inhaled along with that fluid, may produce the irritation alleged, I am inclined to receive with considerable distrust. Mechanical particles, to occasion any serious injury, must be of such a magnitude as would preclude the possibility of their being retained in suspension; and, on the other hand, such as from their extreme minuteness would admit of being so suspended, may either be inhaled with impunity, or must do their mischief in some other mode than the one assigned. It appears to me, therefore, that if consumption does occur more frequently among miners than among some other classes of the community—a position which I think questionable—it must arise chiefly from the laborious exercise necessary in their daily avocations, which, by accelerating the current of the blood through the lungs, may occasion some injury to that delicate organ, especially if any part of the vascular system was predisposed to disease. But to this I would consider them no more liable than any description of laborers on the surface whose stated exercise is equally severe. I am aware that this view of the subject differs from that of many medical gentlemen of established name—yet it has not been hastily or carelessly adopted, but is founded on long observation and experience; and, unless it can be invalidated by opposite experience, I flatter myself that the liberal and enlightened practitioner will hesitate to pronounce it altogether erroneous.—*Ed. Med. and Surg. Jour.*

3. *Phlebitis of the Saphena Veins cured by Compression.*—*May* 27, 1830.—A young man, æt. seventeen, was admitted into the Hotel Dieu, who had been obliged to remain constantly in a standing posture. He was of a feeble habit, and complained of pain and debility of the lower extremities. He had had diarrhœa for two days. This symptom soon disappeared, but the pains in the legs increased. Baths were employed without advantage. The continuance of the pain led to a more attentive investigaion of the case; and on the 7th of June, upon examining the lower extremities, small and irregular enlargements, of a bluish color, were detected upon the course of both internal saphena veins. These enlargements were very painful on pressure, and did not disappear under the weight of the finger. The inguinal glands were not tumefied. There were no red streaks of the skin, indicative of any affection of the lymphatic system. The patient could not bend his knees without pain, on account of a slight swelling in the ham, which was supposed to depend upon enlarge-

ment of the glands of the part, from obstruction to the venous circulation. The pain did not run in the track of the nerves, and was not, indeed present, except when the swelling was pressed upon, when it became very acute. There was little or no fever.

The case was now considered to be partial phlebitis of both saphenæ veins, and M. Recamier prescribed free doses of tartar emetic, which caused vomiting. No benefit was derived from this treatment, which, however, was scarcely continued long enough to enable any opinion to be formed of its efficacy. Compression was determined upon. Firm poultices of linseed were applied, and bound down by rather tight bandages.

The following day, the tumors on the veins were diminished in size, and less pain was felt on pressure. There was an obvious amendment every day, and in a short time all traces of phlebitis had ceased. Compression was still, however, continued, as the pains in the legs had not entirely disappeared.

It is to be observed, that the pains continued some time after the tumors, which showed the character of the disease had diminished. The limbs at length recovered their strength and action, and the patient quitted the hospital entirely cured.—*Journ. Complementaire.*

4. *Abdominal Pressure in Obstetrics.*—The custom of applying a bandage or swathe to a female *after* accouchment, is general, if not universal. It is not, however, so commonly known as it ought to be, that the same application, vigorously made, is a great aid to the expulsive efforts of the uterus. Pressure by the hand of a friend is almost always inefficiently applied; and much time might be saved the pratitioner, and much suffering the patient, if nurses were taught to press with sufficient force, and in the right direction, and at the proper times, on the uterus, during the pains of parturition. The following statement from the London Review, contains a practical lesson on this mode of procedure.

Mr. M'Morris, a medical officer in the East India Company's service, writes to us as follows. "In one of the numbers of the Medico-Chirurgical Review for 1828, I find a bandage proposed by Mr. Gaitskell for obstetric purposes. I have no doubt it will facilitate the parturient powers of Nature by the support and pressure which it affords. It is a common auxilliary among the native women on this side of the Indian peninsula, when the progress of labor is slow. Some of the female attendants, in such cases, place their hands on the abdomen of the parturient patient, and press it pretty violently downwards towards the pubes, having first rubbed it with castor oil. This operation is continued till the child is expelled, which generally happens soon after the mechanical pressure is commenced. If the secundines are not expelled with the fœtus, the woman is left to rest, with a bandage applied pretty tightly round the abdomen. I have been astonished in some cases that I have witnessed, to observe the increase of the expulsive pains soon after this process is put in force."

5. *Remarks on the Operation for the Hare-Lip.*—By Zadoc Howe, M. D., of Billerica, Mass.—Having observed that the operation for the hare-lip generally leaves more or less of the original deformity, I several years ago, adopted a mode of operating a little different from that described by surgical writers upon the subject.

The improvement consists in making two curved incisions, instead of two straight ones, in such manner that the opening, when ready to be brought together, shall resemble half of a leaf of the appletree, cut traversely, rather than the letter V, as directed by authors.

I first used this kind of incision in a cancerous affection of the under lip. The disease lay on the lower part of the lip, and a little down upon the chin; it was thought expedient to cut through the lip, for the sake of uniting the parts by the first intention: the curved incision was used at the time rather with a view to save the destruction of sound parts, than any improvement in other cases. I was gratified with the appearance of the lip when healed, and have always adopted this mode of operating since, in the hare-lip, whenever circumstances would permit.

After the operation, the edge of the lip, instead of drawing in, will turn a little out, giving it more of a natural appearance; and as the perpendicular cicatrix will be somewhat lengthened, no notch will appear in the edge; a circumstance which is very liable to happen after this operation, performed in the usual way. In short, it leaves rather less deformity; which all will allow is an object of some importance in operations upon the face. I suggested the substance of these remarks to the late Professor Smith, of New-Haven, several years ago. He procured a small pair of curved forceps, with a screw in the handles, on the principle of those used for breaking a stone in the bladder. His intention was to fasten the instrument upon the lip, and cut by the side of the blades. How the doctor succeeded with his instrument I never heard.

I have always cut by marks made with ink; and, in the hare-lip, always carry one interrupted suture, with a small needle, as high as possible in the nostril, that no fissure may appear when the head is elevated. One small gold pin, a little curved, together with adhesive straps, completes the dressing. I frequently give the incision a greater degree of curvature upon one side than the other, for the sake of saving the parts—always taking care to make the sides exactly correspond in length, and withdraw the pin in about sixty hours.*—*Am. Journ. Med. Sc.*

6. *Effects of Mercury—Taliacotian Operation.*—A case is recorded in a late periodical, in which extensive exfoliations of the bones of the palate and nose succeeded the free use of mercury. The pa-

* The preceding ingenious method of operating for hare-lip, lately suggested itself to Dr. J. R. Barton, of Philadelphia, and he actually put it in practice, in September last, in the case of a boy in the Pennsylvania Hospital. Dr. Barton supposed the method to be original with himself.—*Ed. Bost. Med. and Surg. Jour.*

tient had never had syphilis.—In this and two other cases, the columna nasi was restored, by Mr. Liston, by a strip of the upper lip, cut quite through and turned up. In his account of the operation, Mr. L. observes that the lateral slip, destined to form the new columna, should not be twisted round, so as to present its cutaneous surface externally, but merely elevated and affixed to the point of the nose. By twisting, the chance of success is diminished, and if the part does adhere, it is thick and clumsy. The mucous membrane forming the inferior surface of the columna, retains some of its characters for a few weeks, but gradually assumes a cuticular appearance. For some time after the operation, on tickling or compressing it, the sensation is referred to the inside of the mouth. Though it might be supposed that, in a male adult, the beard on the inner surface of the new columna would prove a source of irritation, this is not the case; the hairs lose their stiff and bristly character, not being cropped frequently as before, and being constantly moistened by the mucous secretion of the nostrils. In fact they come to resemble those hairs that grow naturally from the parts.

In the above cases, the incisions always adhered by the first intention; and I should think that if proper care be taken to place and preserve the raw surfaces in accurate contact, adhesions will always occur, little or no mark remaining. Indeed, the appearance of the upper lip will always be benefitted by the operation, for when the columna is lost, the lip becomes elongated and tumid at its centre; and by a narrow slip being removed from it, this defect is obviated, whilst the cicatrix, from being in the situation of the natural depression, is scarcely observable.

In the after-treatment, it is necessary to keep the alæ tense by dossils of lint, in order to assist the columna, not yet sufficiently consolidated, in supporting the parts in their natural situation; and when the columna itself becomes tumid, a compress and bandage should be neatly applied over it.

When the cartilaginous septum is destroyed, as is generally the case, of course an aperture remains between the new columna and the oseous septum, but that is not perceived unless on close examination, and does not annoy the patient.

In a recent number of the Journal Hebdomadaire, a case is recorded, in which attempts had been made to restore a lost columna, first by M. Dupuytren, of Paris, and afterwards by M. Gensoul, of Lyons. The operation failed, and the nose became approximated to the lip. M. Dupuytren raised a *flag of integument* from the lip, and adapted it to the nose, after having *twisted it round.* Had he formed his columna from the *whole thickness of the lip*, there would have been no necessity for *twisting* it, and in all probability the operation would have proved successful.

7. *Acetate of Morphia in various Diseases.*—Dr. Bardsley, in his "Hospital Facts and Observations, &c.," a work already quoted in this Journal, has entered somewhat largely on the use of the ace-

tate of morphia in various diseases. He has found it particularly useful in cases of pain at the pit of the stomach, in pyrosis, in uterine diseases, and in neuralgia. Not having the work before us at this moment, we shall quote a few cases, as abridged in the Medico Chirurgical Review for October last.

Michael Sharples, aged twenty-nine, an industrious man with a numerous family, had experienced much pain at the stomach occasionally for several months; and so severe had it been for the last three weeks, that he could not follow his usual employment. His spirits were low, appetite gone, and bowels costive. Leeches and a blister had been tried. The bowels being open by purging medicine, a quarter of a grain of the acetate was given three times, daily, with excellent effect. In five weeks he was discharged cured, but he subsequently applied with a relapse, which was combatted successfully by the same plan of treatment.

We will cite another case.

A young man had suffered, for some months, from such a gnawing pain at the stomach, that he could not continue his occupation, was reduced to poverty, and at last attempted to poison himself with laudanum. After a short course of aperients, Dr. Bardsley gave half a grain of the acetate twice, daily: so much relief ensued that the dose was diminished; and after the expiration of several weeks, he perfectly recovered both his mental and bodily strength.

In the only cases of pyrosis which Dr. Bardsley details, the patient, a female, aged twenty-six, had always been delicate but suffered severely, for the last two months, from gnawing pain at the pit of the stomach, copious discharge of an acid fluid from the mouth, flatulence, and capricious appetite. After castor oil, the acetate was prescribed—a fourth of a grain twice daily; and in six weeks the patient was discharged cured.

It is not to be supposed, however, that Dr. B. regards the acetate of morphia as a sovereign remedy in all cases of dyspepsia. So far from this, he alludes to several cases of the disease in which the remedy was productive of little or no relief. This is exactly what we should have anticipated, from the known effects of the remedy, and the diversity that exists in the nature and characters of dyspepsia. Dr. B. does not appear to think as favorably of *opium* in stomach complaints as the morphia; and among the cases he details, we notice some in which the former of these remedies had been used ineffectually, before Dr. B. resorted to the latter. In our own practice, we have seen opium very useful, and even completely successful in that complaint. In all such cases, the pain recurred after eating, and continued so long as the articles ingested remained in the stomach. Under such circumstances, a small dose of opium, given half an hour before meals, and repeated during a week or two, sufficed to effect a cure. It is very plain that in these cases the pain was nervous, and not the result of inflammation, and that care was taken to ascertain the true nature of the disease before resorting to this plan of treatment.

Dr. B. has used the same remedy, with palliative and remedial effect, in scirrhus and induration of the uterus, and particularly in painful menstruation. In a case of the latter disease, he ordered the patient "to take a quarter of a grain of the acetate of morphia on the first accession of pain, and to continue this proportion every half hour, whilst it was violent. The second dose afforded her very great relief, without in the least suppressing the discharge;" and at the time Dr. B. was writing, she took the morphia at every monthly period, with the same advantage.

Nor did Dr. Bardsley use the morphia with less advantage or success in neuralgia of the face, forehead, lower jaw, &c. In all these cases, the remedy was administered internally. On the subject of this remedy, Dr. B. makes the following general remarks:—

"The above examples seem sufficient to establish the remedial efficacy of the acetate of morphia in several affections. It must be allowed that morphia has not always answered the intentions with which it had been employed; but the proportion of the favorable cases has been considerable, compared to those in which it has failed. I have never witnessed any *pernicious consequences* from a prudent use of the morphia. I am led to recommend the acetate of morphia in preference to opium, from a conviction that its efficacy may be equally relied upon, whilst its administration will be unattended by the *distressing headach, excessive constipation, and other unpleasant symptoms*, which that drug in large doses, mostly induces. It appears to be the chief advantage of morphia, that it may be employed in those cases in which it is desirable to obtain a narcotic effect, and at the same time, of the first importance to avoid constipation. It is proper to unload the bowels before commencing with the acetate, so as to give the remedy a fair chance. It is prudent to commence with not more than a quarter of a grain, which may be gradually increased to half a grain, a grain, or two grains, according to the urgency of the symptoms and the effects produced. These doses are applicable to adults. I have mostly prescribed it in this form of pill, which seems to answer very well."—*N. A. Med. and Surg. Journ.*

8. *Cause of Stammering.*—In our sixth volume, p. 233, et seq. we published Dr. Arnott's explanation of the nature of stammering; and we find in a recent No. of the *Journal of the Royal Institution of Great Britain* some interesting observations on this explanation, by Marshall Hall, M. D. which we will now lay before our readers.

Dr. Hall is of opinion that Dr. Arnott's view of the subject is so far from being correct, that it is quite plain that it is only in the articulation of certain letters that expiration is interrupted, and even in this case the interruption is not in the larynx, the organ of voice, but in some part of the mouth, or organ of speech. "It will assist us," says Dr. Hall, "in the determination of the question, to take a review of the influence which the natural articulation has upon respiration, or rather upon expiration. It may be ascertained, by the simplest experiment, that in the pronunciation of the short word BAT, we adopt

a mechanism, by which not only the different letters are formed, but the respiration is twice completely arrested;—and that, in the pronunciation of the equally short word FAN, we first interrupt the flow of the air through the nostrils whilst it is forced between the teeth and lower lip, and then intercept the course of the air through the mouth, whilst we allow it to pass only through the nostrils.

"It is on their influence on the respiration, that I formed the division and arrangement of the consonants, published in the nineteenth volume of this Journal; their sub-division was founded on the respective mode or mechanism of their enunciation. I divided them—

"1. Into those, in the articulation of which both the mouth and the nostrils are closed, and the respiration, of course, completely arrested.

"2. Into those, in the enunciation of which the nostrils are closed, but the mouth left more or less open, for the exit of the air, which is compressed, but not interrupted in its expiration.

"3. Into those, not requiring even the nostrils to be closed, and in the enunciation of which the air is still less compressed in its course from the lungs: and,

"4. Into those, in the articulation of which the expired air is not interrupted, and scarcely impelled at all.

"Of the *first* class, are

B D G*
P; T; K.

"In tracing these letters into their sub-divisions, we may observe, that the first pair are labials, being formed by the lips compressed together; the second pair are linguo-dentals, formed by pressing the point of the tongue against the posterior and upper part of the upper teeth; and the third pair are linguo-palatal, being effected by pressing the middle part of the tongue against the palate. In all, the posterior apertures of the nostrils are effectually closed by the pendulous vail of the palate being drawn upwards, and accurately applied to their posterior apertures. And of course, those persons whose palate is perforated, or in whom the pendulous vail of the palate is imperfect, as sometimes arises from disease, are more or less incapacitated from pronouncing these letters, the expired air being no longer intercepted, as it ought to be, in its course.

"Of the *second* class, are

F
V; the TH†; and S
Z.

"In the articulation of these letters, the posterior orifices of the nostrils are required to be closed, whilst, in the first pair, the compressed air is continually forced between the upper teeth and the under lip; in the second, between the teeth and the tongue; and in the third, between the point of the tongue and the anterior part of the palate.

"From this view of the subject, it will be readily apprehended how the substitution of D or T for the TH, by foreigners, is so remarkable;

* i. e. the *hard* G. † *Hard* and *soft*.

for it is no less than the substitution of a total interruption, for a mere compression of the air, in its exit from the chest.

"Of the *third* class of letters, are

M; N; L; R.

"In the enunciation of these letters. the expired air is only very slightly compressed, the nostrils being left freely open. It is for this very reason, probably, that these letters have been termed *liquids*, as flowing without obstacle. And it is by this circumstance, principally, extraordinary as it may appear, that the letter M differs from the letters B and P, for they are all equally labial; and that the letter N differs from T and D, for they are all equally formed by placing the point of the tongue near the roots of the upper teeth.

"Of the *fourth* and last class, are

H; the Greek X; Y; and W.

"In the enunciation of these consonants, the air appears to be scarcely compressed or impeded in its exit at all. This fact may, I think, account for the circumstance, that it has even been doubted, whether the two last letters be really consonants or not; and for the remarkable fact, that they cannot, as *consonants*, form the termination of any word. Their mechanism is guttural, double dental, and labial, respectively.

"These letters, preceded as they are in this arrangement, by the liquids, lead us almost insensibly to the class of letters to be next noticed, namely, the *vowels*.

"These are so called, from having been supposed to relate to the *voice* alone.* This, however, is obviously an error. The different parts forming the mouth, or organ of *speech*, are not less necessary to the enunciation of the vowels, than to that of the consonants, or their function less appreciable, on carefully making the experiment. Thus, the French U is entirely labial; the letter E is dental; O, palatal; whilst the dipthong AW, and the vowels marked in the French language by the circumflex, (ʌ,) are guttural.

"Now let any one carefully examine the effort made by the stammerer in his attempts at the enunciation of these various letters. It will be obvious that the malady is but an exaggeration of the natural effort. In attempting to pronounce the letters of the first class, violent efforts are made, yet expiration—articulation—is not effected; but there is frequently, nay generally, a peculiar noise heard in the larynx, although its full enunciation is prevented by the action of the muscles of the mouth. But if the letters of the second class are pronounced with stammering, there is a perpetual hissing from the escape of compressed air, in the case of the letters F and V, between the lips, in that of the TH, between the tongue and upper teeth, and in that of the letters S and Z, between the teeth. In the stammering enunciation of the letters of the third class, there is frequently a state of laborious respiration. In all these cases, then, it is plain that the larynx is open; any considerable effort applied to the parts concerned

*Blumenbachii Institutiones Physiologiæ, Ed. MDCCCX, Sectio IX.

in the articulation of the first classes of letters—the least noise—the least escape of air, alike demonstrate this fact. In the natural, and in the stammering articulation, there is the same total or partial interruption of the expiration, at the same parts, not of the larynx, but of the proper organs of articulation, only in different degrees. Let the larynx be really closed, which may be done after a little trial, and it will immediately discovered that stammering is, in fact, impossible; the effort made by the force of the expired air against the parts of the mouth called into action in the articulation of the first class of letters —all escape of air—all noise, become totally interrupted.

"I have just attentively watched the attempts of a stammerer to articulate the various letters.

"In the effort to pronounce the first class of letters, especially the letter T, still more if T's come together, as in the words THAT TREE, the face became flushed even from interrupted expiration; yet there was, at every repetitition of the effort, a noise audible in the larynx, proving that this part was unclosed.

"In pronouncing the letters of the second class, a repeated hissing noise was distinctly produced by the flow of the compressed air, in one case, (F, V,) between the under lip and upper teeth; in the second, (TH,) between the tongue and upper teeth; and in the third (S, Z,) between the teeth.

"In attempting the articulation of some of the letters of the third and fourth classes, and some of the vowels, the breath was sometimes lost, as it were, in a full and exhausting expiration, altogether peculiar.

"All these results prove that the larynx is not closed in stammering, and indeed that its closure and stammering are totally incompatible with each other. When expiration is interrupted, it is by the co-operation, the co-adaptation, of parts anterior to the larynx; it is, in a word, not an interuption in the organ of voice, but in that of speech. The paralysis of the laryngeal muscles could not, therefore, effect the good which Dr. Arnott ingeniously supposes.

"But would no evil really result from this paralysis of the muscles of the larynx? Would the 'loss of the faculty of closing the larynx' really 'be of no moment?' On the contrary, the accurate closure of the larynx, not by the epiglottis, but by means of its own muscles, is essential to the act of deglutition. This is demonstratively proved by M. Majendie, in his interesting memoir, 'Sur l'usage de l'Epiglotte dans la Deglutition.' The fact is further proved by cases of actual paralysis of the laryngeal muscles occurring in the human body, and by the effects of inflammation and contraction, and of ulceration of the internal parts of the larynx, inducing defective deglutition."—*Amer. Journ. of Med. Sciences.*

9. *Itching of Delicate Surfaces.*—Dr. Ruan, a Parisian physician, of celebrity in a communication to Professor Hufeland, of Berlin, states, that he has succeeded in some distressing cases of incessant itching of parts of the body, covered with skin of very delicate struc-

ture, after opiates and internal and external remedies had totally failed, by the exhibition of the balsam of copavia in the dose of twenty-five drops three times a day. In two cases in which it failed, a solution of the borate of soda (a dram to half a pint of fresh elder-flower water), used as a lotion, was employed with success. In another case, a permanent cure was obtained by sprinkling the parts, which were excoriated by scratching, with a powder composed of starch and the levigated carbonate of zinc.

Dr. Dewees, in his treatise on the Complaints of Females, has noticed a few cases of this most distressing malady, in which balsam copavia and a lotion of the borate of soda speedily and perfectly succeeded.

This disease is probably a variety of chronic erysipelas, differing from that of the skin of the face, neck, and chest, from the peculiar delicate texture and secretion of the parts in which it occurs. It is a curious fact, that a topical application, which in one case has had a speedy effect in curing it, in another apparently exactly similar in every respect, will often aggravate the disease. Generally speaking, we have found the constant application of a solution of acetate of lead with acetate of morphine, in fresh elder-flower water, with attention to the stomach and bowels, and the internal use of the blue pill and extract of cicuta, to succeed, it some obstinate cases, the ointment of the prussiate of mercury has had a very happy effect, having succeeded in effectiag a cure in the course of a few days. After rubbing a little of this ointment over the surface, it should be applied, spread on fine lint, so as to prevent the surfaces coming in contact. In cases of long standing the cuticle is so much diseased, that no lotion or ointment can succeed till it has been destroyed by a weak solution of nitrate of silver, which, so far from increasing the irritation, considerably allays it. We have met with cases which were aggravated by oily or greasy applications and by lotions, which gave way to the frequent application of a mixture of plain hair-powder, and a small proportion of hydro-sublimed calomel.—*Gaz. of Pract. Med.*

10. *Effects of Posture of the Pulse in Health and Disease.*—It is known that considerable variety, both in strength and frequency of pulse, is observed in the erect, the sedentary, and recumbent postures. Dr. Thompson, of Edinburgh, first pointed out some of these differences from an extensive series accurate observations; and these were confirmed by Dr. Stroud, in the numerous experiments made by him on the patients of the clinical wards in the years 1816 and 1817. Unaware of these experiments apparently, Dr. Graves has, with extreme diligence, devoted himself to the observation of the varieties of the pulse, not only in the erect and recumbent posture, but in the inverted, with the feet above and the head dependant. The author found, however, that this position produced less effect than he anticipated. The frequency of the pulse in this position, was neither retarded nor accellerated; but its strength was diminished, sometimes very considerably, and occasionally it became very irregular: a cir-

cumstance which Dr. G. is inclined to ascribe to the weight of the column of blood pressing on the aortic valves, and thus augmenting the impediment to its exit from the ventricle.

Dr. Graves found the pulse less frequent, from six to fifteen beats in the minute, and stronger, in the horizontal than in the erect posture, and he infers, that in this position its maximum of strength and minimum of frequency are at once attained. This fact he thinks may explain the relief obtained by placing patients in the horizontal position in order to avoid fainting, for instance, that produced by venesection. This, however, with deference to the author, we must be permitted to question. Syncope from venesection is doubtless occasioned from the blood being so suddenly drawn off, that there is no longer a sufficient quantity left to excite the action of the heart; and it is with equal certainty obviated by placing the patient in that position, in which, while the blood is drained off from the inferior vessels, it may, by being gradually allowed to flow from the superior ones, still be adequate to excite the heart.

In all diseases, except cases of hypertrophy with dilatation of the heart, Dr. Graves found the pulse to differ in frequency both in the erect, sitting, and horizontal postures. In four of these six cases, the fact of hypertrophy with dilation was ascertained by inspection; and of the other two, in one it was certain during life, and in the other was at least probable. It would be doubtless premature to speculate on the cause of this peculiarity, until the phenomenon has been observed in a greater number of cases. We conclude our account of this paper by subjoining the general conclusions, which Dr. G. thinks may be established from an extensive number of observations.

"1. That the greatest difference occurs in patients laboring under fever, or in a debilitated state, in consequence of fever or any other cause. It may amount to thirty, forty, or even fifty, between the horizontal and erect postures.

"2. That this difference decreases after the first quarter of an hour, in most cases, but always remains considerable as long as the same position is observed.

"3. That in persons not much debilitated, the difference is much less than that stated above, and often does not amount to more than ten.

"4. That when the patient lies down, the pulse rapidly falls to its former standard.

"5. That in some the frequency is greater between the horizontal and sitting posture, than between the latter and the erect, while in others the contrary takes place, so that generally the frequency of the sitting posture may be taken as a mean.

"In persons convalescent from fever or acute diseases, I find it is extremely useful to the physician to ascertain the comparative frequency of the pulse in the horizontal and erect position. The greater the difference, the greater is the debility of the patient; and, consequently, the more guarded must his medical attendant be in allowing him to sit for any length of time, particularly if the pulse, on his lying

down, does not resume its usual degree of frequency."—*Edinburgh Med. and Surg. Journ.*

11. *On the Compound Syrup and Fluid Extract of Sarsaparilla.*—Since the publication of Dr. Hancock's paper in the Transactions of the Medico-Botanical Society of London, and which was copied into the Journal of the Philadelphia College of Pharmacy (vol. i., p. 295), there can remain but little doubt that the frequent inefficacy of the sarsaparilla arises chiefly from the careless or the erroneous manner in which it is generally prepared. Of all the forms in which this important remedy has been exhibited, perhaps none has obtained so little justice in its preparation, and consequently in the estimation of those who have to judge from its remedial effects, as the syrup. It is now generally conceded, by those who have paid any attention to the subject, that the effective principle of sarsaparilla like that of many other vegetables, is entirely destroyed by long exposure to a boiling heat; yet all our authorised formulæ for the preparation of the syrup are liable to this objection. As far as my knowledge extends, they all direct it to be made by decoction in water, or by long-continued hot infusion; and we have invariably, in consequence, two evils to endure—the presence of a large quantity of feculent and mucilaginous matter, which causes rapid decomposition; and, what is still worse, the absence of nearly all the active principle of the root, which has indeed been effectually *stewed down.* The French Codex, for example, directs two pounds of the roots to be infused for twenty-four hours in twelve pounds of warm water, then boiled a quarter of an hour, and the residuum submitted to another, and still another boiling, with ten pounds more water each time down to six. The mixed decoctions are then to be again boiled, with the senna, &c., down to one-half; after straining, the sugar and honey are to be added, and the whole boiled a fifth time, in order to form the syrup! Swediaur, in his *Pharmacopœia Medici Practici Universalis,* orders to boil the sarsaparilla twice in successive portions down to one third (nine pints down to three), and repeated; then to infuse the senna, &c.; and afterwards to boil again with the sugar and honey. The Antwerp *Pharmacopœia Manualis* directs the root to be infused in hot water for twenty-four hours, the infusion stewed down to one-third; this operation repeated twice with the dregs; the mixed liquors then reduced to one half; the herbs infused towards the end of the evaporation; and lastly, the sugar and honey to be boiled to a syrup in the infusion. It would be tedious to particularize further the various formulæ for this preparation, which are more or less similar to those I have detailed. The American Pharmacopœia of 1820, differs in no essential point. The London College has no compound syrup, but directs the simple to be made by maceration of the root in boiling water for twenty-four hours, evaporating to one half (which must be done by continued boiling), and, lastly, boiling and evaporation again after the addition of the sugar, to form a syrup of proper consistence. The boiling point of such a compound being higher than that of water,

subjects it to an obvious additional disadvantage. Indeed, by a strange mistake it seems to have been generally taken for granted, that long boiling was the best, instead of the worst mode of extracting the active principle from the sarsaparilla. Can we therefore be at a loss to account for the fact, that our *sirop de cuisinier* has none of the sensible properties of the sarsaparilla, and often requires the assistance of mercury to give it any effect whatever?

To obviate the disadvantage of so inert a preparation, I determined, some months ago, to try a different process, and I have obtained a syrup, which has in perfection the characteristic acridity of genuine fresh sarsaparilla, and discovers no tendency to fermentation through the hottest part of our summer. The following is the formula which I can recommend for general adoption.

R. Rad. sarsaparillæ contus. lb. ij.
Rad. glycyrrhizæ contus.,
Fol. rosæ rubræ,
Fol. sennæ aa oz. ij.
Ligni guaiac. rasi, oz. iij.
Spir. vini tenuioris. O. x.

Digest for fourteen days at a common temperature; then strain, express, and filter, evaporate the tincture by a water bath to four and a half pints (so as to get rid of the alcohol), then add, white sugar, lb. viij., and form a syrup, removing it from the fire as soon as the sugar is dissolved. When cold, add

Ol. anisi, gtt. vj.
Ol. gaultheriæ, gtt. iij.
Ol. sassafras, gtt. vj.,

previously rubbed down gradually with a little of the syrup. From these quantities I obtained seven pints of syrup, possessing, as I have said, the double advantage of the perfect extraction and preservation of the active principle, and the absence of any fermentable matter.

A somewhat analogous preparation of the sarsaparilla has lately been introduced into practice, under the name of the Compound Fluid Extract, which, if properly prepared, would contain the sarsaparilla in a concentrated state, but which has hitherto suffered the same fate as its milder relative, the syrup. It has generally been prepared by evaporating the compound decoction and adding a little sugar; and consequently shares the disadvantages of that preparation in a still greater degree.* Applying to this preparation the principles on which I made the syrup, I have obtained a compound fluid extract of a very superior quality, and possessing in an eminent degree the active properties of sarsaparilla. The following is the process:—

R. Rad. sarsaparillæ contus. oz. xvj.
Rad. glycyrrhizæ contus.,

Ligni guaiac. rasi,
Cort. rad. sassafras aa oz. ij.
Cort. rad. mezerei, oz. vj.
Spir. vini tenuioris O. viij.

Digest for fourteen days, at a common temperature; then strain, express, and filter. Evaporate the tincture in a water bath to 12 fluid ounces; then add of white sugar oz. viij., and remove from the fire as soon as the sugar is dissolved. Where the quantity made is considerable, it may be worth while to preserve the alcohol for future operations, by distilling instead of evaporating it. During the process a small quantity of resin separates by adhesion to the sides of the vessel, and which appears to be merely from the wood of the guaiacum. We have here a preparation, a fluid drachm of which contains in perfection the active principle of a drachm of sarsaparilla, and of which two fluid ounces are equal in strength, and similar in composition, to what one pint of the compound decoction of the Pharmacopœia would be, were it possible to prepare it without more or less destroying the active principle of the sarsa.—*Philad. Journ. of Pharmacy.*

12. *Case of Putrefactive Disorganization of the Lungs.* By Robert Law, A. M., M. B.—John Dunne, tailor, aged nineteen, of a thin delicate habit of body, was admitted into Sir Patrick Dunn's Hospital for fever, in the progress of which he was seized with a profuse expectoration of fluid arterial blood, which he said he had often had before his admission; his pulse was small and rapid. (R. Misturæ Camphoræ, v. drams; Tinctur digitalis, gutts. xxx.; Tinctur opii, gutts. xx.; Syrupi, ss. drams, Misce sumat unciam omni trihorio.) The hæmoptysis ceased; in the course of the fever, he exhibited symptoms which gave strong grounds for suspecting effusion in the head, by becoming comatose, the pupils widely dilated did not obey the stimulus of light; these symptoms, however, yielded to the application of cold wash to the shaved head, a blister to the nape of the neck, and sinapisms to the feet; his febrile symptoms soon disappeared, but he complained of a teasing cough and palpitation of the heart, for which I repeated the camphor mixture and digitalis, with the following pills:

R. Extract conii gr. viij.
Pilulæ ipecac. gr. iv. fiant pilulæ quatuor una tertiis horis sumend.

These lessened the heart's action and the irritation of the cough, but he was much debilitated, and perspired much at night. I in consequence ordered bark and sulphuric acid, and the tepid shower bath, from which he seemed to gain strength. I now lost sight of him for some time, when he came to me to complain of the unceasing irritation of the cough; he was much emaciated and decidely hectic; his breath and expectoration were extremely fœtid; in all the right lung respiration could scarcely be heard; under the left clavicle was imperfect pectoriloquy; he died in two days from this, about six weeks since his first admission into the hospital.

Examination fifteen hours after death; head not examined; the apex of the right lung adhered so firmly to the corresponding part of the cavity of the chest, that it could not be separated without breaking its structure; this lung was much heavier than natural, and felt quite solid, except at its base; the investing pleura was universally thickened, and in some places had acquired the density of fibro cartilage. The entire substance of the lung, except the base, was thickly studded with tubercles; the pulmonary tissue surrounding these bodies was either broken down into a soft brownish sloughy substance, or so condensed as to have its cellular nature quite destroyed; there were many irregular cavities traversed by bands of pulmonary structure; the surface of each cavity exhibited a blackish sloughy appearance; the base of the lung was quite free from tubercles, but was in the first stage of pneumonia.

The left lung exhibited a similar disorganized condition; the small irregular cavities were more numerous, and the intervening pulmonary structure softer, presenting the same dirty, sloughy, broken down appearance. On pursuing some of the bronchial ramifications which opened into these cavities, their lining membrane was highly vascular, and, in some instances, black; the base of this lung too, was in the first stage of pneumonia, and free from tubercles; the left cavity of the pleura contained about a pint of straw-colored serum; the pericardium, about eight ounces of the same fluid. There was also an infiltration in the sub-serous tissue, connecting the substance of the heart and the pericardium; the heart was small and flabby; the abdomen contained about two quarts of serum, all the viscera of this cavity were healthy.

We here have an instance of the disease, combined with tubercular phthisis, and, in consequencec, running a much more rapid course, and exhibiting a more distinctly marked hectic fever, than the uncomplicated disease ordinarily does. As usual, it was ushered in by a profuse hemorrhage, to which succeeded cough and fœtid expectoration; as in ordinary phthisis, the superior portion of the lung was the point de depart of the disease.

A striking circumstance in this case is, the effusion into all the serous cavities, which I suspect also took place into the brain, when the coma, dilated pupils, &c., gave evidence of its existence.—*Transactions of the Association of Fellows and Licentiates of the King and Queen's College of Physicians in Ireland, N. S. Vol. I.*

13. *Gaseous Tumors of the Uterus.*—Two very interesting cases of this description are related in the fourth volume of the *Opuscoli della Societa Medico-Chirurgica di Bologna.* As we have not received that work. we translate from the December No. of the *Revue Medicale* the following notice of them.

Case I. A plethoric female, in the prime of life, being suddenly exposed to cold during menstruation, the discharge was suppressed. Acute pain in the region of the uterus was quickly induced, as well as a marked augmentation in the size of this organ, which reached to

the umbilicus. The patient was unable to move her lower limbs, or even her body. To the chill with which the disease was ushered in, succeeded fever with excerbations; in the evening there was thirst, and great uneasiness. On examination of the uterus, its tympanic condition was easily ascertained. A large bleeding from the foot, emollient fomentations, enemata of chamomile and of elder, did not at all diminish the condition of the uterus, which even became rounder: leeches were applied to the vulva with no more success. The symptoms constantly augmenting, another examination was instituted; the finger was introduced into the meatus uterinus, which gave issue to a quantity of fœtid gas. The size of the hypogastrium diminished very sensibly, but soon again increased. Fumigations by means of a tube introduced into the uterus were then resorted to, which caused a very copious discharge of gas, accompanied with clots of blood, which continued several days, and produced a complete cure.

Case II. *Gaseous Tumour of the Uterus simulating Pregnancy.*—A woman, aged forty, who had never had any children, exhibited some signs of pregnancy. The menses, which had always previously been regular, were suppressed; the meatus uterinus was entirely closed; the patient did not however experience any of the disorders which attend pregnancy. The uterus, however, towards the fifth month was as high as the umbilicus, moreover its form could be distinguished by pressure with the hand. Such was the condition of this woman, when towards the sixth month all these prospects vanished; in stooping, a great discharge of flatus took place, the abdomen fell, and in a few days returned to its natural condition.

16 *Small-pox Infection Communicated to the Fœtus in Utero without the Mother feeling any indisposition from its Action on her own Constitution.*—We published in our last No. p. 555, a case in which this very curious phenomenon occurred. Since the publication of that No. we have met with accounts of several cases in which a similar occurrence took place, so that it appears not to be quite so rare an event as our correspondent supposes. Dr. Edward Jenner relates in the first volume of the *Medico-Chirurgical Transactions* of London, two cases of this kind, and alludes to one mentioned by Dr. Mead, and he says that he is acquainted with more examples of a similar description. As this is so interesting a pathological phenomenon, and as the work in which these cases are published is rarely to be met with in this country, we shall give a brief account of them.

The first case is related by Dr. Jenner. Dr. J. was requested by Dr. Croft to vaccinate an infant, and scarcely any effect being produced beyond a little efflorescence on the part, which in a few days disappeared, Dr. J. expressed his surprise when the mother related to him the following particulars:

"A few days previous to her confinement, she met a very disgusting object, whose face was covered with the small-pox. The smell and appearance of the poor creature affected her much at the time; and though she mentioned the circumstance on her return home, she had

no idea that her infant could suffer from it, having had the small-pox herself when a child. During a few days after its birth, the little one seemed quite well, but on the fifth day it became indisposed, and on the seventh the small-pox appeared. The pustules, which were few in number matured completely. Dr. Croft, who attended her, being curious to know the effect of inocculation from one of the pustules, put some of the matter taken from one of them, into the hands of a gentleman eminently versed in that practice, which produced the disease correctly. Mrs. W. was not sensible of any indisposition herself from this exposure, nor had she any appearance of the small-pox.

The following case, similar in its general character, was cummunicated to Dr. J. by Mr. Henry Gervis. During the prevalence of a small-pox epidemic, Mr. Gervis vaccinated a woman in the last month of her pregnancy. "Her three children had been inocculated the proceding day with variolous matter by the surgeon who attended the poor of the parish, and who had very properly declined inoculating her also, from her particular situation. I made two punctures in each arm, each of which fortunately succeeded, and she regularly passed the disorder, complaining only on the tenth and eleventh days, when the areola was most extended, as is usual. I saw her very frequently during the progress of her disorder. and once or twice after its complete termination: I therefore can speak positively, that during that time she labored under no symptom but what is connected with the cow-pox. From this period she continued perfectly well, and on Saturday last, the 11th instant, she was delivered of a female child, having at the time of its birth many eruptions on it, bearing much the appearance of small-pox in the early stage of the disease. This event happened five weeks after her vaccination, and one month after she had been exposed to the variolous infection of her own three children, and that of several other persons in the same village. On the 14th I visited the child again, when I found the eruptions had increased to some thousands, perfectly distinct, and their character well marked. Many among the most respectable physicians and surgeons from Totness, Ashburton, and the neighborhood, were kind enough, at my request, to come to the poor women's place of abode; and witness the fact. But to put the matter beyond all doubt, I armed some lancets with the virus, and produced the small pox by inoculating with it. On the 18th the infant was seized with slight convulsions, and on the morning of the 19th, it expired."

The following case is related by Dr. Mead, in his discourse on small-pox. "A certain woman, who had formerly had the small-pox, and was now near her reckoning, attended her husband in the distemper. She went her full time, and was safely delivered of a dead child. It may be needless to observe, that she did not catch it on this occasion; but the dead body of the infant was a horrid sight, being all over covered with the pustules; a manifest sign that it died of the disease before it came into the world."—*Amer. Jour. of the Med. Sciences.*

15. *Sulphurous Fumigations.*—In pursuance of the object stated in our last, we commence with an account of the trial made by Dr. Bardsley, at the Manchester Infirmary, of the sulphur Bath, in diseases of the skin, and of some other textures. The extreme obstinacy of a large number of the diseases which pertain to the cutaneous tissue,—their ordinary connection it is difficult to remove, and if removed, still more difficult to avoid in future, and the length of time they have generally existed before application is made for relief, render it very desirable to add some safe and effectual remedy to those already in common use among the faculty. In no instance within our knowledge, has so thorough and extensive an experiment been made of sulphur fumigation as a means of curing such diseases, as that an account of which is contained in the report of Dr. B. Within the last five years, more than 3000 patients have been subjected to the same remedy, and the number of baths given to each has varied from 10 to over 300. The report sets forth, in satisfactory detail, "the *happy results* attending the practice." Bad effects have sometimes ensued from its employment, but most of these are attributed to inattention in the selection of cases,—or to the co-existence with the cutaneous affection of some pulmonary or gastric disorder, leucorrhœa, or other complaint, which may be aggravated, rather than relieved by it.

On the other hand, there are some derangements of other organs in the skin, which, so far from forbidding the use of the sulphur bath, invite us strongly to its employment. In some obstinate cases of *amenorrhœa*, the discharge was found, by Dr. B. to return during the use of fumigation. In like manner has it proved curative of *sciatica, local palsy, scrofulous affections of the joints, obstinate ulcers af the lower extremities, indolent tumors, glandular enlargements,* and other complaints of chronic character. Acute diseases were generally found to be aggravated by it.

In two cases of *Diabetes*, a faithful trial of the sulphur bath was made by Dr. B. In one of these cases, the patient, a young man of 24, had labored under diabetic symptoms for more than six months, and for the last nine had been under treatment at the hospital La Charité at Paris. He made 26 pints of urine daily. After a short course of laxatives, he was subjected to the sulphur bath every second day; and it is equally surprising and gratifying to see, by the table annexed to the case, the uniform diminution of this quantity, which was effected by the treatment. December 2d, it was 26 pints.—February 25th, it was but two pints. On the 17th of March he was discharged in the enjoyment of good health, and returned to his native France and to his former occupation as a manufacturer.

Of 40 cases of *Chronic Rheumatism* from two months to twenty-four years duration, 30 were cured, 7 were relieved, and the remaining 3 were obliged to discontinue the bath.

The particular diseases of the skin in which it was employed with success by Dr. Bardsley, are—

1. *Scabies.*—In this, the sulphur bath is universally acknowledged to be the most elegant and least disagreeable remedy, and Dr. B. found it by far the most successful. "I have always seen, says he, the most obstinate and neglected cases of it yield very speedily to a few fumigations." To this we can add the testimony of our own experience—having never failed to cure the disease effectually and speedily by a few baths properly and thoroughly administered.

2. *Impetigo.*—In this very common and troublesome affection, which resists, as most other cutaneous diseases do, the long catalogue of popular or rather vulgar remedies, as sarsaparilla, dulcamara, pyrola, dock-root, &c., very marked advantage resulted from the sulphur fumigation. It should never be employed, however, until any signs of acute inflammation in the skin have been subdued by leeches and fomentations locally, and general depletion in the few cases in which such resort is indispensable. In that species of the disease termed by Willan Impetigo Scabida, this remedy has proved especially beneficial.

3. *Porrigo.*—In most of the forms of this disease, the bath was found useful. But as it usually occurs in situations where the fumes cannot be conveniently retained, and readily yields to other treatment, it can scarcely be considered as worth while to give it a trial.

4. *Prurigo.*—In whatever form or situation it appears, no local remedy is so agreeable to the patient, or so sure to remove his disease, as that now under consideration. But be it this or any other, the use of gentle aperients and cooling diet is alike indispensable to a permanent removal of the disease.

5. *Lepra.*—Of 40 cases of leprosy treated at the Infirmary by the sulphur bath, 29 were cured, and eleven more or less relieved. To the use of this remedy in lepra and other *scaly* diseases, the author seems particularly desirous of calling the attention of the profession. "My experience of its high value," says he, "leads me to recommend it as a remedy infinitely superior to every other in those obstinate affections." Besides the cases of lepra above referred to, Dr. B. gives an account of four, which occurred in his private practice, in each of which a cure was effected by the sulphureous fumigations *alone;* although all of them were confirmed cases. In his hands this remedy was equally successful in that which is among us the most common of all cutaneous diseases, viz.

6. *Psoriasis.*—20 patients, suffering under this disease, received the bath at the Infirmary. Of these 14 were perfectly cured, 5 were relieved, and I found it necessary to discontinue it.

In addition to these he says, "I have the authority of an eminent member of the bar for stating, that after an *effectual* trial of various remedies, both in London and the country, for the removal of an obstinate psoriatic disease, he obtained a cure by a persevering employment of the sulphur bath."

7. *Icthyosis.*—This disease, most fortunately of rare occurrence yielded to the fumigations, and to these alone, in the practice of Dr. B, He appears, in this and other scaly affections, to have given a full

trial to ordinary remedies. Where the bath was used simultaneously with these medicines, the complaint yielded no more readily than where the fumigations alone were depended on. Still we should deem it unwise to trust to their sole agency in all cases, or to expect, in private practice, that so large a proportion as he has given, would yield to such treatment. The persevering use of acknowledged alternatives, should, in our opinion, accompany that of the bath. Of the two, Dr. B. appears to have found the unaided efforts of the former much less successful. than the latter when administered alone.

8. *Pompholyx.*—The bath was adopted in only two cases of this disease, and in both it proved serviceable. As an example, we will offer the details of one of these cases in the author's own words.

John Smethurst, 15 years of age, was admitted as an out-patient of mine on the 13th of June, 1826. His mother stated that the vesications made their appearance shortly after bathing, whilst the body was much heated from violent exercise. He was first seized with rather severe febrile symptoms, which were removed by the aid of venesection, purgatives, and diaphoretics. The vesications were chiefly confined to the inferior extremities, though many were present on the face and trunk. With a view to their removal, I directed my chief attention to the state of the boy's bowels, prescribing Plummer's pill at bed time, and a gentle aperient in the morning. During the day, he used the decoctum sarsaparillæ compositum, and entered the warm bath every other night. This plan was steadily pursued for more than five weeks, but with very little benefit; for no sooner had some of the bullæ discharged their lymph and healed, than others either reappeared in their place, or arose in fresh parts of the body. I now directed him to enter the sulphur bath every morning, and to discontinue his former remedies. Smethurst received fifty-four baths, when he was discharged perfectly well.

In the 17th volume of the Edinburgh Medical and Surgical Journal, a case of pompholyx is related in the report of the Royal London and Westminster Infirmary for Diseases of the Skin, which was cured by the use of the sulphureous vapor bath. One among many remarkable and instructive cases (says Dr. Emerson), the medical officers wish to bring under your notice. It was an inveterate instance of the pompholyx, which had resisted the various treatments of several hospitals. It occurred in a young girl. Her sufferings were not to be described, but by the use of the bath and some internal medicines, she now enjoys a comparative degree of health and comfort; and her tender age renders it extremely probable, that the cure may be as permanent as it has been satisfactory."

It appears to us that the great fault among general practitioners who have assayed this remedy, has been a want of perseverence in its use. Ten or a dozen baths are considered a fair trial in almost any case; but in truth there are few, very few, instances of disease so mild as to yield to so short a series. In ordinary cases the itch may be cured by this summary process; but with this exception, we should not dare promise amendment even, till twenty had been tried, or think

of being discouraged if fifty failed of conquering the disease. The great secret of the success of Dr. B., is his perseverance in the use of this remedy; and those, we apprehend, who follow him in this respect, will be most likely to be rewarded by similar results.

The next difficulty in the way, is the careless manner in which the remedy is administered by unprofessional persons. Women who know nothing of the nature of the disease to be cured, and little more of the nature of the remedy, are, or certainly have been, entrusted with the management of these baths. This is very wrong. It is a powerful application—requires judgment—carefulness—knowledge. "It must be recollected," says Dr. B., "that this method of cure requires both caution and discrimination;" and which of these can be expected in a female who is ignorant of the disease, the remedy, and its modus operandi.

Another obstacle in the way of a full and frequent use of this bath is, the want of a convenient apparatus for administering it. The old sulphur baths were clumsy and inconvenient, and the profession and the public are greatly indebted to Mr. Wallace, Surgeon to the Skin Infirmary in Dublin, for his improvements on the machine. But even these have still their imperfections.

Deterred chiefly by the foregoing circumstances from advising sulphureous fumigations so frequently as we desired in private practice, we caused, a few years ago, a neat and extremely convenient apparatus for this purpose to be constructed; and having since been in the habit of applying it personally to a large number of patients, we have fully tested its advantages over those, more bulky and expensive, which come to us from abroad. We are all, it is true, apt to appreciate too highly the results of our own industry and our own ingenuity; but when those results have been put to the test of direct and repeated experiment, we may be allowed to judge of their value with a greater degree of accuracy. Having enjoyed these facilities, then, for the employment of sulphur fumigations,—moved from the objections to their use, which have already been alluded to, we can readily accord to the accuracy of the observations of Dr. B., although we have seldom employed them to the same extent in any individual case, or found them equally capable of removing chronic and long and obstinate cases of lepra and psoriasis without the aid of internal remedies.

To those who are desirous of further information on the subject of this bath and its value as a medical agent, we recommend the short essay of Sir Arthur Clarke, and the observations of Mr. Wallace—*Boston Med. and Surg. Journ.*

NEW PESSARY.

To the Editor of the Boston Med. and Surg. Journal.

16. *Sir*,—I was favored a few days ago, with the 1st No. of the N. Y. Medical Journal. After reading Dr. Beck's Address, Dr. Avery's paper upon the Professions in England and France, with his very illiberal remarks upon Mr. Brodie (for which he is repaid in the Re

view of his work on Dyspepsia), I next came to a well written practical Essay on Prolapsus Uteri, by Locke Barber, M. D., &c. &c., read before the N. Y. Medical and Philosophical Society,—a disease which gentlemen in extensive obstetric practice often meet with, and as often fail in giving permanent relief, without the aid, either of the natural pessary of pregnancy, or one made of the many substances, compositions, or shapes, suggested by different authors, ancient and modern. Wood, silk, linen, elastic gum, cork-wood, box-wood, ebony, steel, silver, and even gold, have all had their advocates in turn. The round, oval, flat, globular, and so forth, have been equally praised for shape. Towards the latter part of Dr. B's Essay, he strongly recommends a globular air pessary, of which he appears to consider himself the inventer. He thus expresses himself:—"The instrument which has been alluded to for supporting a prolapsus of the womb, and the one which *I have had the honor to introduce into practice*, is of a globular shape. A bag of elastic gum, of a suitable size, is secured, perfectly *air-tight*, to a tube of ivory and silver. The tube contains a valvular mechanism, capable of retaining such quantity of air as may be introduced into the bag, which is done by means of other tubes, and a large elastic bottle, so that the pessary may, with the greatest ease, be either inflated or exhausted, after it is introduced into the vagina. By a reference to the plate and explanation, a better idea of its principle may be gathered, than from any other description. In 1829, Dr. Painhaud, an intelligent and extensive obstetric practitioner of Quebec, read before the Quebec Medical Society* a paper on Pessaries—an extract of which I have obtained in the words and language of the author.†

"You will recollect, gentlemen, that at the close of the last paper which I had the honor to present to this Society, reference was made to a new pessary which I had invented. Having tested its value by subsequent experience, I propose this evening to explain to you its peculiar construction. The subject is one of much more importance in practice than is usually accorded to it." * * * * *

"In surgery, as in other arts, we are all influenced by a love of invention, but the great error is that we are too ambitious—we are emulous of splenpid discovery, and disdain to give our attention to subjects of small pretention." * * * * In all sciences, discoveries, often the most important are the result of accident; and it is to accident alone, that I am indebted for the pessary I am about to describe."

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* The Quebec Medical Society has been in existence some years,—papers of considerable merit remain on their shelves unpublished; and if asked why, I should be at a loss to answer

† This extract was sent us in French—the language in which the paper was originally written and read to the Society. In order to save the reader some trouble, we have hastily translated it into English, preserving certainly the facts, if not the precise diction of the author. Our correspondent will excuse us for omitting part of the extract sent. On examination he will find it irrelevant to his purpose.—Ed.

"A few months ago, I was present at an operation, by a professional friend, for *fistula in ano*. Hemorrhage became alarming, and not being able to apply a ligature, or sufficient pressure to arrest the bleeding, the operator directed compresses wet in iced water to be applied constantly. It occurred to me to introduce into the rectum an empty bladder, of small size, and then to fill it with cold water by means of a syringe: I then drew it outward, (having secured its neck) until it pressed against the bleeding vessels with force sufficient to arrest the hemorrhage; and thus was the life of the patient saved. Reflecting on the possibility of applying this remedy in other and often dangerous cases of internal hemorrhage, the idea of its use as a *pessary*, suggested itself to my mind; and in the *bladder of a sheep*, I found a pessary of a construction heretofore untried, and of a material analagous to that of the parts with which it is to lie in contact; an instrument readily obtained; easily introduced when empty of air; easily removed by letting out the air, water, or other liquid with which it had been injected; easily retained in its place, as it becomes larger than the passage through which it was introduced; and worn without pain to the patient, so similar is its material to that of the part on which it rests, it is scarcely possible, in fact, to find in any instrument a more perfect adaptation to the purposes for which it is designed."

Having communicated this discovery to Dr. Morrin, that skilful practitioner thought it deserving the attention of the profession, and proposed as a substitute for the bladder, the gum-elastic bag, such as is used for injections in cases of Hydrocele."

Being present at the reading of the above paper, I understood Dr. Morrin to say, in addition to his suggestion about the hydrocelle bottle, that one made of the same substance, but circular and hollow, to be inflated in the same manner, would, he thought, be preferable to either, inasmuch as it would not necessarily have to be removed during menstruation; and concluded by regretting he was going to contest Dr. B's claims as the inventer of the Air Pessary. Opening at the moment the 3d edition of Dr. Aitken's Principles of Midwifery, or Puerperal Medicine, published in London, in 1784, he read as follows:—"Supporting the replaced uterus is not a little difficult. It is attempted; 1st, by a pessary; 2d, bandage.—*Pessary.* Of all the varieties of this instrument, that is preferable which possesses the following qualities,—1st, smoothness; 2d, lightness; 3d, compressibility. I have invented the Air Pessary, which has these characters in a greater degree than any other I know of. The Air Pessary is formed of a small bladder or bag, soft and air-tight, with a valve at the orifice. It is introduced, and then duly inflated, by the patient, by a long flexible tube, which is immediately retired. This instrument, while it is exceedingly light, fully occupies the vagina, and supports perfectly the uterus. When it is wished to retire it, the valve is forced, and immediately it collapses" (see plate xi). During the reading, and for some minutes after, the palsied and astonished countenance of the Dr., at being so suddenly and unexpectedly deprived of his claim as the inventer of the Globular Air Pessary, satis-

fied every member present that he was no plagiarist, but truly the inventer of what turned out to be an "old friend with a new face." The above, Mr. Editor, is an unvarnished and plain statement of facts, as I became acquainted with them. I should hope there has been no literary pilfering among the competitors.

Yours, &c. *A Quebec Subscriber.*

17. *Efficacy of Hydrocianic Acid in curing Vomiting not dependent upon Inflammation.*—We extract from a clinical lecture by Dr. Elliotson, reported in a late number of the London Medical Gazette, the following remarks on the efficiency of hydrocianic acid as a means of arresting vomiting. It should first be ascertained, says Dr. E., whether there is inflammation or not; for if there be inflammation, the hydrocianic acid would not cure it; the case must be treated like inflammation of any other part of the body. But if you can find no inflammation whatever, and you find no cause for vomiting in any other parts of the body, (it will often arise from an irritation in the intestines, the kidney, the womb, and ten thousand distant causes,) then the hydrocianic acid will relieve the vomiting far more, I am satisfied, than any other medicine. I have not found it relieve the pain of rheumatism or cancer, or pain situated in any of the distant parts of the body, or pain in the intestines; it is of no use in colic, though it is said by some to be of occasional service in neuralgia. As an anodyne, I have not found it of the least use in general, except in cases of pain of the stomach. It has the properties of an anodyne on the stomach particularly, and has a tendency to lessen the morbid irritability which produces vomiting. It is no exaggeration when I state that I have frequently seen vomiting, which has lasted for months, cease on the exhibition of the first dose of this medicine. Frequently however, in cases of spasmodic pain of the stomach, you will find that the first dose, or the second, or even one week's exhibition, will not answer the desired end; you will be much more struck with its use in lessening vomiting than in lessening pain in the stomach. But you will find it of no service unless you make a distinction between the existence of inflammation and the influence of distant causes on the one hand, and mere morbid irritability of the stomach itself upon the other.

Hydrocianic acid is a medicine that is exceedingly powerful, and you cannot give it in the same dose when the stomach is empty as when it is full. When the stomach is full, the difference of a drop may cause a great difference in the effects. Supposing you are giving three drops, three times a day after meals, it certainly will not be right to give more than one or two drops upon an empty stomach. To avoid any confusion which may arise, it is best always to give it after meals, otherwise you must vary the doses at different times of the day. You cannot, in general, give it on an empty stomach more than once in the day, because when food has been once taken, the second meal comes usually before the stomach is as empty as it was before. On this account I make it a rule to give it after breakfast, in the afternoon, and the last thing at night. As it is so powerful, you cannot tell be-

forehand the dose that will be borne, and you should begin with a small quantity, such as you know can hardly disagree with the stomach. I begin with one minim, though you may begin with two, and many persons do so, but it is safer to begin with one. I give one minim three times a day, diluted with water, or aromatic water; and in the course of a day, if no unpleasant effect be produced, I increase the dose to two minims, and the third or fourth day I give three minims, and so on till it produces the effect I desire, or some inconvenience arises. Although it will relieve the vomiting arising from mere morbid irritability, it will, from its irritating properties, likewise cause it. If you give an over dose, it may produce extreme nausea, extreme vomiting, and perhaps gastrodynia—pain in the stomach. It is common for many narcotics to be stimulating as well as sedative, and this is the case with this medicine; and medicines act with different power upon different people; and therefore you should give it in small doses at first, if you wish to make it act favorably. Tobacco will arrest the action of the heart, and cause complete prostration of strength, and yet it excites sneezing, and one person is effected by a quantity not noticed by another. In general, people bear from two to four minims, but you not unfrequently meet with individuals with whom five minims do not disagree, and now and then you may safely increase the dose to six or eight, or even more.

You will find this of great use for another purpose—for making other medicines sit upon the stomach, which would otherwise disagree with it. You may lessen the natural irritability of the stomach so much, that iodine, colchicum, and medicines of that active description, will frequently sit upon it, whereas they would not, unless, ten minutes before you administered them, you gave a dose of hydrocyanic acid. These medicines may remain upon the stomach if you unite prussic acid with them, but it answers better for this purpose if given ten minutes before, so as to come into full operation before the acrid medicines are taken. In organic affections of the stomach, you will frequently find it better than any other medicine; if there be cancer of the stomach, schirrhus, pylorus, or whatever the organic disease may be, you will often find the hydrocianic acid allay the vomiting and pain much more than any thing else.—*Gazette Medicale.*

18. *Radical Cure of Hernia.*—We find in the 'Gazette Medicale de Paris,' for July last, a report by M. Breschet, to the Academy of Medicine, on two memoirs by Dr. Ravin, of St. Vallery-sur-Somme, on the radical cure of hernia. This method is only applicable to recent and small, or better to old and large hernias, in which there are no adhesions between the sac and the contained parts, and in which the latter is perfectly reducible. The method consists in reducing the hernia, and keeping the part which protruded as long as possible at a distance from the canal, so as to allow of the slow contraction of the aponeurosis, dilated by the protrusion of the intestine, which contraction, M. R. says, will take place when no mechanical obstacle is opposed. The method of M. R. requires that the patient should be

placed upon his back, the pelvis raised higher than the diaphragm, and the side on which the hernia is situated hgher than the sound. A bandage must be placed over the orifice of the ring, and compresses, either dry or moistened with tonic and astringent lotions, placed between the cushion of the bandage and the inguinal ring; the most absolute rest is also necessary.

M. R. relates eight cases cured by these means. The cases occurred in persons of different ages, and both sexes. Thus one was a man, aged twenty-six, with a recent and small inguinal hernia—he was cured in twenty-six days. Another, a woman aged sixty, affected with hernia for upwards of twenty years, was cured in six months. The ordinary duration of treatment, however, has been two months. M. R. requires his patients to wear a bandage for some time after their cure, but he has never seen a relapse except when the patient has not continued in a recumbent posture during the whole course of the treatment.

The reporter speaks favorably of the candor with which the memoirs are written, and the evident desire of the author to relate the truth, and to advance science. The treatment is safe and worthy of trial.

M. Dublas, of Lyons, has also communicated to the Academy of Lyons, a memoir on the radical cure of hernia; the method proposed by him is:—diet, repose, recumbency on the back, and astringent applications upon the hernia. The Gazette Medicale, to which we are indebted for this notice, does not furnish us with further details.—*Amer. Jour. of the Med. Sciences.*

19. *New Method for the Cure of Hernia.*—M. Belmas has communicated to the Institute, a method for the cure of hernia, proposed by himself, and which is thus described in the *Journal des Progrès*, Vol. III. 1830. If a gold-beater's skin filled with air, be introduced into the abdominal cavity of a dog, it excites around it, but merely to an extent corresponding with its size, an inflammatory irritation, followed by a lymphatic deposition, an absorption of air, and also of the bag itself; so that at the expiration of some days, a concrete albuminous mass can only be found, and after some weeks only a fibrous knot remains. Similar experiments made by M. Belmas on the hernial sac of dogs, have been followed with the same result as in the abdominal cavity. Filled with the distended bag, the sac inflames through all its extent, and is obliterated in a few days in the manner above-mentioned, without preserving any remains of the foreign body introduced. Of thirty female dogs affected with hernia, which have thus been operated on, in spite of the indocility of these animals, thirteen have been radically cured. M. Belmas operates in the following manner:

A small bag of gold beater's skin, perfectly empty, is connected with a tube furnished with a stop-cock. A small incision is made with a short and narrow bistoury, at the most inferior part of the hernial sac, the edges of which are drawn asunder, and there is introdu-

ced into the sac a canula and stilette, to the extremity of which the tube of the bag is fitted. The point of the canula is pushed with suitable precautions to the superior part of the sac, near the neck. The stilette is then protruded, and through the opening which it makes in the skin, the cannula and the tube of the bag are to be drawn out. To this tube is to be attached that of another bag filled with air; the stop-cock of the first is to be opened, and a sufficient quantity of air is injected into the bag of gold beater's skin, and there retained by closing the cock. The operation has already been practised on a man, and with complete success, notwithstanding unfavorable circumstances, such as the advanced age of the patient, his cachectic constitution, a paralysis of the bladder, and a chronic catarrh. Much swelling succeeded on the second day, and M. Belmas dreaded some unpleasant consequences, but none occurred. For two months and a half there has been no return of the hernia, although the patient is the subject of an habitual cough. This man has been presented at the clinique of the Hotel Dieu.

It should be remarked, that the bag should be introduced, in a dry state, into the sac. M. Belmas, who at first thought it most convenient to cover it with oil, discovered that this alone was sufficient to prevent its absorption.—*Ib.*

20. *Cases of Dislocation of the Thigh Bone, with Remarks, by the late Mr. Averill, Surgeon, Cheltenham.*—Case 1.—*Dislocation of the Thigh Bone into the Ischiatic Notch.*—On Tuesday evening, September 2d, 1828, I was called to the hospital, to see Thomas Perry, 6 1-2 years old, whom I found in his father's arms, struggling and crying very loudly. He was stated to have received an injury to the lower part of the belly and the thigh, by a person jumping accidentally upon him out of a rail-way cart, and alighting between his thighs. As I perceived he moved both his legs, and as they appeared both of the same length, I conceived it to be only a bruise, and directed him to be put to bed for the night. The following day there was considerable swelling round the hip, and handling the limb occasioned the child a great deal of pain, and caused him to cry loudly. An evaporating lotion was directed to be applied, and aperient medicine was ordered. The next day, the swelling having still increased, leeches were applied, and any attempt to move the limb, or make a particular examination, set the boy crying to such a degree as almost to cause convulsions. Occasionally, during the one or two following days and nights, he cried so much as to disturb the other patients, and the nurse observed he started frequently in his sleep. As the swelling subsided, he became quieter, took his food, and appeared easy. To-day, the ninth day from the receipt of the injury, the swelling having quite subsided, I made a more particular examination of the limb, and found that the head of the right thigh bone was dislocated into the ischiatic notch. On placing the limbs parallel to each other, and placing the toes together, the dislocated limb appeared to be from half to three-quarters of an inch shorter than the other; and the knee

was inclined inwards; the limb admitted of rather free motion, and when it was rotated the head of the bone could be felt behind the acetabulum lying over the ischiatic notch.

My colleagues having examined the limb, and agreeing with me as to the nature of the injury, it was considered best to attempt the reduction with the pullies. To effect this, a wetted roller was applied above the knee, to which another portion of doubled roller was attached; the pelvis was fixed by a silk handkerchief being passed between the thighs, and then attached to the upper bed-post. The pullies being fixed to the roller at the knee, and attached to a table placed against the foot of the bed, another handkerchief was passed round the upper part of the the thigh bone, so as to lift the head of the femur over the margin of the acetabulum. Extension was made in a direction obliquely forward, and kept up for twenty minutes, when the knees appearing parallel to each other, the pullies were suddenly loosened, in the hope that the head of the bone would be drawn into the socket; this however, was not the case, for it returned again to the ischiatic notch. Extension was again made, and continued for near half an hour, when, at the time the knee was being rotated outwards, the head of the bone was drawn into its natural situation, the sudden jerk of which, though in so young a subject, was evident to all assisting in the reduction. The knees and feet were confined by a roller, and the patient was left.

Sept. 23d.—To-day he was lifted from his bed, placed on his feet, and allowed to try to walk, which he could not do without support. I directed that he might try the same daily.

Dec. 4th.—He was discharged from the hospital able to walk with but little lameness.

In offering a few observations on this case, I must plead guilty to the charge of not having minutely examined the boy when first admitted into the hospital but I had no suspicion of a dislocation occurring in so young a subject, and I felt at the time satisfied, from the degree of motion of which the limb admitted, that the part was only bruised. That a dislocation into the ischiatic notch, in so young a subject as the one here related, is a very rare case, may be inferred from the fact that Sir A. Cooper. in the course of his extensive practice, has never met with an example of it. He has related one case of a little girl seven years old, in whom the head of the bone was dislocated on the dorsum ilii, and this is the only case he has known of dislocation from accident in the young subject. When much swelling and inflammation are present, to make out the exact nature of injuries in the vicinity of the hip joint, is exceedingly difficult, and, in all cases, not possible. I was once consulted in a case of this kind, in which, not exactly agreeing, as to the nature of the injury, with the gentleman who was in attendance, a third was called in, of greater experience than either, and who differed from us both, giving his opinion in the most decided manner; yet this gentleman, I understand, on seeing the case again, after the tumefaction had subsided, gave an opinion directly opposed to that he had previously so unequivocally

expressed. A further proof of the difficulty of making a correct diagnosis of injuries in the neighborhood of the hip joint, is evinced in the case of a physician of eminence in an adjoining county, who, I am informed, though a long sufferer, and still lame from an accident of this kind, is not aware of the injury he has sustained. No means of reducing the muscular power were resorted to, in the above case, further than exhausting it by continued extension. The boy was but a weakly subject, and I did not choose to risk the chance of a fatal termination, by producing a state of exhaustion from which it was possible he might not have recovered.—therefore, neither the warm bath, nor emetic tartar, were had recourse to. My fears on this head must not be considered wholly without foundation, as two cases have come to my knowledge, in which death has speedily followed that state of collapse, produced by these means of depletion which are occasionally had recourse to, with success, during the attempts to reduce dislocation of this description.

Case II.—*Dislocation of the Thigh Bone into the Foramen Ovale.*—On the night of August 5th, 1829, I was sent for, with Mr. Skelton, of Charlton, to see Mr. Acott, aged 21, a muscular farmer, who, in returning from Cheltenham fair in a gig, with two others, was thrown from the vehicle, in consequence of the horse taking fright. We found him lying on his back, in bed, with his right thigh separated widely from the left, and the extremity near two inches longer than the other, admitting of very little motion, and causing great pain. Though the head of the thigh bone could not be felt, there was no doubt in the minds of Mr. S. or myself, that it was dislocated into the foramen ovale, and, as soon as the proper apparatus could be procured, we reduced it in the following manner:—The patient was placed on his back, on a table, in the passage of the house; a jack towel was carried round the pelvis, to fix it, and a belt, to which the pullies were attached, were passed round the upper part of the thigh, between it and the scrotum, and fixed to a staple in the wall. About twenty ounces of blood were taken from the arm, and a grain of emetic tartar given; slight nausea was soon produced; extension was then made in a direction obliquely outwards and upwards, and, in about three minutes, on bringing the knee inwards, the head of the bone was drawn suddenly into the acetabulum. The feet were then bandaged together, he was put to bed, and in about ten days left his room.

The ease with which this dislocation, in a very muscular man, was reduced, forms a striking contrast to the preceding, and shows how desirable it is that the attempt to replace the bone should be made as soon as possible after the receipt of the injury, and before the muscles have become in a permanent state of contraction.

Case. 3.– *Dislocation of the Thigh Bone on the Dorsum Ilii.*—Nov. 24th, 1829.—In consultation with Dr. Boisragon and Mr. Seager, I saw a lady, aged 44, who, a few days previously, had dislocated her right hip. As the patient was thin, the head of the bone could be felt on the dorsum of the ilium; the limb was shortened, so that the great toe was resting against the tarsus of the other foot. As an at-

tempt to reduce the dislocation the day previously had been made, with towels, we thought it better to employ the pulleys, which were used in the precise manner directed by Sir Astley Cooper, for the reduction of this kind, and it was not till extension had been continued for upwards of an hour, that the head of the bone was replaced, which happened while the knee was being rotated. Emetic tartar was administered to the extent of eight grains, previous to, and during the reduction, but no sensible effect was produced by it, till upwards of two hours after she was replaced in bed. The feet were bandaged together, and she did very well.

Our efforts to reduce this dislocation were considerably opposed by those of the patient herself, who was, at the time, insane, to which circumstance the tardy action of the emetic tartar may properly be attributed.—*Midland Med. and Surg. Reporter.*

21. *Remarks on the use of Injections of Warm Water, with a Description of an Apparatus for their Administration.*—By Leonard Pierce, M. D. of Sutton, Mass.—In the Boston Medical and Surgical Journal, of May 3d, I read some remarks on the use of injections of syringe used for that purpose. I have been in the practice of using these injections for different diseases, especially the spasmodic ones, for more than two years past, and have been pleased to find them producing the most happy effects. Most of the cases in which I have used these injections, have been of colic, convulsions, and constipation. The quantity of water thrown up, should be from one to four quarts, according to the effect intended to be produced. The common injection syringe is inconvenient for this use, from the necessity for its frequent application. To remedy this evil, I had a syringe made by Mr. Oliver Hall, an ingenious artist of this town, in the form of a pump, with a pipe at the end for admitting the water, guarded by a valve opening inwards; and another pipe at the side to be attached to a tube, communicating with the rectum, with a valve opening outwards. This latter valve has a spring on its outer surface, by which it is kept constantly closed except when forced open by the descent of the piston. The body of the syringe, the pipes, and the cap, are of tin (block tin); the shaft of the piston is iron, coated with silver to prevent its rusting; the piston itself is a cork turned to fit the calibre of the pump, or syringe (which is about three-fourths of an inch in diameter), and confined between two plates, the upper one of brass, the lower one of iron, through the centre of which the shaft passes. The lower plate, or that nearest the end of the shaft, screws on so that the cork may be compressed, and its diameter increased whenever necessary. The whole length of the pump, when the piston is down, including the end pipe and the elevation of the shaft above the cap, is between five and six inches. To the end-pipe a wooden tube is fitted, with holes through the sides, near the lower end, to let the water through. This tube, when used, may be placed on the bottom of the vessel containing the water, and thus serve to support the pump. It may be dispensed with at any time, if found inconvenient. The com-

mon flexible stomach tube is the one I use for connecting the pump with the rectum. To the open extremity of this tube, a piece of wood is attached, into which the pipes are made to fit. The pipes are made so as to be separated from the body of the pump, in order to get at the valves, should they need repairs.

The whole of the apparatus, except the tube, may be packed into a box and carried in the coat pocket. The tube might be made in pieces connected together with silver, so as to render it suitable for an œsophagus tube, and the pieces be packed in with the pump.

When it is to be used, the patient should be placed upon the bed on one side, with his back near the edge of the bed. An assistant should then take the tube, and having it well anointed with lard or sweet oil, introduce it into the rectum from two to twenty inches, according to the effect intended to be produced. When the intention is merely to solicit an evacuation, it need not be introduced farther than within the spincter ani, unless it be in obstinate cases of constipation, when it should be put far up. If the tube meet with any impediment to its passage, attach the pump, and throw up some water, which will remove the obstruction if it be hardened feces. If, after this has been done, the tube should not pass up readily, or if the patient should complain of much pain when the attempt is made, it is presumed that the obstruction is a spasm of the intestine. In this case, more water should be gently pressed up, occasionally making an attempt to carry up the tube. This will generally succeed in overcoming the spasm, so that the tube may pass and the injection be completed.

Generally, after from one to two pints have been thrown up, vomiting comes on, after which, in cases of colic or convulsions, the disease abates, and the patient falls asleep. But in this case the better way is to let the tube remain in the rectum; for frequently the pain and convulsions will return, and more water will be required. Perseverance in this course will almost always effect a cure, without any other remedy than a little opium after the spasm or convulsions are overcome. In violent cases, bleeding may be necessary; it should always precede the injections where an inflammatory action is established before they have been given. This treatment does much less injury to the intestines and the system generally than cathartics—the relief is altogether more prompt, and a relapse is much less to be feared.

These injections are often very efficacious in the treatment of obstinate cases of constipation. They should be given at stated periods, and in pretty large quantity, so as to pass into the colon, and, if possible, into the small intestines. I think they might also be used with advantage in some of those cases usually called dyspepsia. In cases of hysteria attended with convulsions or with coma, they must be useful, although I have never given them a trial. In the incipient stages of cholera and dysentery, soothing injections, such as mucilage of gum arabic, flaxseed tea, starch, &c., are very useful, and in many cases will be rendered more so, if thrown up in large quantities.

In no case in which I have used these injections, have I combined any other ingredient with the water than a little molasses, sufficient to give it the color of brandy. I have seldom, however, made this addition; but from the effects in those cases where I have used it, I think it will be useful where it is desirable to produce a determination to the skin.

The most immediate effect produced by these injections, is vomiting. In every case where I have used them to the extent of two pints or more, vomiting has followed almost immediately, and I believe it to be the most speedy, effectual, and least irritating method of evacuating the stomach that can be adopted, unless it be by passing a tube down the œsophagus. Stimulants are seldom if ever useful where a large quantity of water is used. In the 14th No. of the American Journal of Medical Sciences, is a case related by S. C. Roe, M. D., of New-York, in which the patient swallowed two and a half ounces of laudanum, with an intent to kill himself, and obstinately refused to take any remedy. Dr. Roe introduced into the rectum the tube of a stomach pump, twenty-three inches, and threw up half a gallon of water, holding in solution fifteen grains of tartarized antimony. "This," says Dr. Roe, "was no sooner accomplished than the patient complained of nausea and an inclination to evacuate his bowels, which was quickly followed by full vomiting, repeated several times successively; but the disposition to alvine dejections passed off without effect." It will not, I believe, be contended, that the medicines introduced into the intestines, with an intention of producing an effect on the stomach, will act more promptly than when taken into the stomach itself. But according to Dr. Roe, the medicine, which, when taken into the stomach, requires from twenty to forty minutes to produce its full effect, operated almost instantly, and most effectually too. Now this is precisely the effect which I have witnessed in numerous instances where nothing was used but water, or molasses and water, and I believe the only effect of the antimony was to increase the "languor and debility" of the succeeding day.

Injections of cold water would probably be useful in the incipient stages of inflammation of the bowels. But after the intestines have become seriously diseased with inflammation, it may be questioned whether they would be beneficial. I used them in but one case of this kind, and that was where the disease had existed several days, and an inflammatory action was established. The pain occasioned by throwing up the injection was so great, that I was obliged to desist. It was probably produced by cold, and distention of the intestines. The injection used was flaxseed tea. In all cases where injections are used, great care should be taken not to force them up too fast; for after having distended the intestine, it might and probably would be ruptured, if much force should be applied to the piston. Every person acquainted with the mechanical properties of fluids, knows when a closed vessel is filled with a fluid through a small opening, the pressure on the inner is as much greater than the pressure of the fluid through the tube, as the area of the vessel is greater than the area of the open-

ing. It is by virtue of this law, that a man standing on the board of a collapsed bellows, and having a small tube passing through the board to the inside of the bellows, all other openings being closed, can, by blowing through the tube, fill the bellows with air, and raise the whole weight of the body merely by the power of his lungs. This must render it evident to every person, that there will be great danger of rupturing the intestines, if much force be used in forcing down the piston. Nurses are not only generally ignorant of this law of fluids, but suppose that the larger the vessel, the more divided the pressure will be, and that hence the more water is thrown into the intestine, the less caution will be necessary, and, instead of abating, will increase the force upon the piston of the pump. They should always be strictly charged on this subject, when entrusted with the administration of enemata. Where circumstances do not render it improper, the physician had better throw up the injection himself. Having the patient placed on the bed as directed, the tube may pass out from under the bed-coverings, and the pipe be attached to it, and the injection given while the patient is not in the least exposed. If this method of administering enemata were generally adopted, and simple warm water, or molasses and water used instead of those loathsome and disgusting compounds which many nurses and some physicians seem to vie with each other in conjuring up, much of the prejudice which now exists in relation to them would be overcome, and many of those active and irritating medicines which are now kept in the family medicine-chest for indiscriminate use, would make way for the much less hazardous, but more effectual remedy,—an injection syringe and its appendages.

This instrument may also be used for a stomach pump, either for filling or evacuating that organ. The tube is made to be attached to either pipe, thus making it a suction for a forcing pump, as occasion may require. An objection may be made to its use as a stomach pump, from the liability of its valves to become obstructed with the contents of the stomach. But I believe but very few if any cases will occur, in which it will be necessary to use the pump for the purpose of evacuation. When the tube is introduced, the resistance of the œsophagus and cardia is entirely overcome, and the evacuation of the stomach through the tube is by the same law it would be if no vitality existed in the parts. Now this being true, if, after the stomach is filled with water, the mouth be placed lower than the stomach, this ocgan will be as surely and effectually evacuated as it could be if the pump were used. Therefore, after sufficient water has been thrown into the stomach, let the patient lie upon the bed with the face downwards, the stomach lying across some pillows placed for the purpose, and the head depending over the edge of the bed. Gentle pressure being now made over the stomach, the water will be driven out through the tube. After all the water has been discharged, more may be thrown in and again pressed out, and in this way the stomach be effectually drenched. Or, if the contents of the stomach be too coarse to pass through the tube, let the water be given

per anum sufficient to produce vomiting. Vomiting induced in this way, occasions much less effort, than when produced by an emetic.
Sutton, May, 1831.

22. *Lithotrity.*—Some time since, the general administration of the hospitals of Paris, gave to M. Civiale, the charge of a ward in the Hospital Neckar, which was assigned for the treatment of calculous patients by lithotrity. In a report lately made to the Academy of Sciences, and which we find in a late number of the Gazette Medicale de Paris, M. Civiale states, that within the space of six months, sixteen patients were admitted into his ward: seven of these were operated upon by lithrotity, four by lithotomy, and the five others were not in a condition to undergo any operation.

The first case operated upon by M. C. was a young man; the calculus was friable, and filled the cavity of the bladder almost entirely, so that it was difficult to inject into that organ a few spoonfuls of water. The patient was cured.

The calculus in the second patient was small, but there was stricture of the urethra, which it was necessary first to destroy—great tumefaction of the prostate, and catarrhus vesicæ. These circumstances would have rendered the operation impracticable, had the calculus been large; being but small, it was completely destroyed in ten minutes.

The third patient was a man of almost eighty years of age, much worn down by acute and long-continued sufferings. The stone was as large as a pullet's egg. The patient supported the operation well, notwithstanding his advanced age.

The fourth patient was sixty years of age, and so irritable, that the introduction of a bougie into the urethra produced convulsive actions. The irritability was diminished by the repeated introduction of bougies and an appropriate medical treatment, and in four sittings of some minutes each, the calculus, (an uric acid one,) which was the size of a small nut, and very hard, was destroyed. The fifth case was that of an old man, exhausted by pain and the great alteration of the genito-urinary organs. The bladder was the seat of catarrh, and contained a great number of calculi, requiring many sittings for their destruction. The other two cases do not offer any thing very remarkable in their details, except that in the one the patient had learned to arrest the evacuation of his urine before the bladder was completely emptied, and thus preserved himself from the pain commonly suffered by calculous persons when the bladder contracts upon the stone; and the other is interesting as showing the little influence which the operation exerts in general upon other coexisting organic lesions.

M. Civiale states that he has himself operated upon one hundred and fifty-two patients, but he does not communicate the proportion cured.—*Amer. Jour. of the Med. Sciences.*

23. *Section of the Sciatic Nerve.*—This operation has been performed by Dr. Malagodi, of Bologna, for the cure of an obstinate

neuralgia, seated in the superficial nervous ramifications of the leg and foot, eleven years duration, and which had resisted a multitude of remedies. Previous to the operation, Dr. M. tried a number of experiments upon dogs, from which it appeared that the section of the sciatic nerve, two-thirds down the thigh, produces paralysis, and subsequently atrophy, but not gangrene. That this paralysis extends from the middle of the leg to the extremities of the toes—that the leg does not, however, lose the power of sustaining the body, or become unfit for the purposes of locomotion, the muscles which move it not being paralysed, and the knee joint not being affected. It is also proved by amputations of the thigh, that the division of the nerve does not compromise life. These results determined Dr. M. to perform the operation, which he accordingly did on the fifth of March, 1828, in the presence of Professors Matheo Venturoli, Paolo Baroni, and M. Joseph Bertolotti. The patient was a man aged thirty-one years. The incision was made about three inches above the popliteal hollow, and was two inches and a half in extent. At the moment when the section of the nerve at the upper part of the wound was made, there occurred a trembling of all the limbs, and a pain similar to the pricking of needles rapidly extending from the place of section to the spinal column and brain, and the patient fainted. When he recovered, which was very soon, Dr. M. requested him to be very attentive to his feelings, and the nerve was then divided at the lower portion of the wound, without the patient being aware of it. Upwards of two inches of the nerve was thus removed, in order to prevent its reunion. From the moment of the division of the nerve, all pain ceased, and had not returned five months after, when Dr. M. communicated the case to the Medico-Chirurgical Society of Bologna. There was paralysis however of the leg and foot, with tingling and sensation of weight in these parts, but there remained an obtuse sensibility of the inside of the leg.—*Gaz. Med. Feb.* 1831, *from the Osservat. Med. XXIII.*

24. *Wound of the Pericardium and Heart.*—M. Larrey exhibited to the Academy of Sciences, at their meeting on the 12th of December last, a soldier who had been wounded by a ball, which passed through the chest, entering two or three lines from the left nipple, and passing out between the spine and the scapula, half an inch from its inferior angle. It is supposed that the ball passed through the pericardium, a portion of the left lung, and furrowed the surface of the heart. There was, at the moment of the accident, extreme prostration, with all the symptoms which characterise these lesions. It was expected, for the first forty-eight hours, that he would expire every moment. By appropriate means he was recalled to life, and the cure was complete.—*Gazette Medicale.*

25. *Vagitus Uterinus.*—M. Baudelocque has communicated to the Academy of Sciences, a case of labor, in which the waters being evacuated, the face of the child presented to the neck of the uterus,

and the child uttered cries as strong as if it had been delivered. This and some analogous facts prove, according to M. Baudelocque, that it is important to introduce air within the membrances, as he has proposed when the child is in danger of perishing.—*Journal Universel et Hebdomadaire.*

26. *New symptoms of Pregnancy previously to the Fourth Month.*—It is well known how uncertain the signs of pregnancy are, previously to the fourth month. Dr. Beccaria announces in the *Annali Universali di Med.* for September last, that he has discovered a symptom by which it may be determined: this is a very acute pulsating pain in the occipital region, occupying particularly the part in which Gall locates the organ of the instinct of reproduction. This pain, Dr. B. says, is accompanied with giddiness on the least motion of the head, and with difficulty in supporting the light. This pain comes on suddenly, without any premonition; it continues for some time; an inclination to sleep succeeds, and after sleeping some minutes, the patient awakes completely free from the pain, and with a strong desire for food. These pains re-appear daily, at nearly the same hour, for about eight days; they afterwards disappear spontaneously, without any remedy employed to remove them earlier. This sympton, Dr. B. says commonly manifests itself, unaccompanied with the signs usually laid down as denoting pregnancy previously to the fourth month. Dr. B. asserts that he has observed this symptom in women who were not aware of being pregnant, and even did not suspect the fact.

Should the assertion of Dr. Becaria prove true, it will not only be highly important in a medico-legal point of view, but extremely interesting in a physiological one.

MEDICAL STATISTICS.

27. *Report of the Coombe Lying-in Hospital.* By Richard Reed Gregory, Esq.—Since the opening of this institution on the 3d of February, 1829, 691 patients have been delivered in the hospital, of whom nine died. The presentations were as follows:—natural 645; face 2; breech 14; feet 7; arm 3; shoulder 1; funis 7; twin cases 12; total 691.

"In two of the twin cases the breech presented, in two others the head; in one the first child presented with the head, the second with the feet; in another the first child with the breech, the second with the arm, the other six were presentations of the head and breech.

"The following table exhibits the number of births, and the sex of the children, arranged according to the age of the mother, from fifteen to forty-five inclusive, taking an average of every five years.

From	Males.	Females.	Total of Births.	Still Born.		Total Still Born.
				Males.	Females.	
15 to 20	19	15	34	2	2	4
20 to 25	114	93	207	14	6	20
25 to 30	100	88	188	9	7	16
30 to 35	106	79	185	10	2	12
35 to 40	33	23	56.	1	1	2
40 to 45	15	17	32	0	1	1
45 to 50	0	1	1	0	0	0
	387	316	703	36	19	55

"Of the still born children there were 29 premature, 2 abortions, 3 arm presentations, 3 natural cases, 3 crotchet cases, 4 cases of prolapse of the funis, 3 feet presentations, and 4 breach ditto: of the 12 cases of twins, four children were still born, making a total 55 deaths. Premature labour is a circumstance of very frequent occurrence among the women residing in this district of the city, owing to their irregularity of living, and the brutal treatment they often receive from their husbands.

"Of the arm cases, one did not come into hospital until twenty-four hours after the waters had drained off, and the child had been forced into the pelvis by the violent action of the uterus, which continued after her admission, so as to render turning impracticable. Spontaneous evolution, (as it is termed by Dr. Denman,) took place in this case in nine hours after her admission. The patient recovered without a bad symptom.

"Another was admitted in the eighth month of pregnancy; she was seized with labor the day before, and the waters had been discharged for four hours previous to her admission. No difficulty, however, was experienced in turning and the woman recovered rapidly."

The third arm case was a second child in an instance of twins.

"Of the crotchet cases.—The operation in one instance was had recourse to in consequence of deformed pelvis, and the length of time she had been in labour previous to her admission, besides which there were unequivocal evidence of the child's death. The operation was performed with ease, and the child extracted with perfect safety to the mother, but very unfavorable symptoms soon showed themselves, and ultimately sloughing of the neck of the uterus and adjoining parts took place, which caused her death fourteen days after delivery.

"Another was a soldier's wife, who had been in labour four days previous to her being sent into hospital, during which time she said she had not passed water: the bladder was greatly distended. The operation of embryotomy was had recourse to immediately after her admission; the head being so impacted in the pelvis as to prevent the use of the forceps. When the child was extracting, it was found to be very much enlarged from putrefaction: she lived for nearly three weeks, having labored under a continued hoarseness, and nearly loss of voice. These symptoms existed at the time of her admission. On examination after death, there was ulceration of the chordæ vocales, and evident inflammation of the mucous membrane of the bronchial tubes. The uterus had two small abscesses in its substance. The third was operated on in consequence of the length of time, eighteen hours, the head had been in the cavity of the pelvis, without the slightest advance, though the labour-pains continued violent, and after the forceps had been tried. This woman speedily recovered.

"Of the funis presentations.—Two cases occurred in women who had come a considerable distance on foot, from the country, to be confined; a large portion of the cord was down, and pulsation had ceased previous to admission.

"In the third case of funis presentation, the discharge of the waters and the falling down of the funis, were the first symptoms which attracted the patient's notice, the former having fallen considerably below the external parts without any previous pain.

"Of the footling cases, one was an acephalous fœtus, and the cord presented along with the foot. Of the breech presentations, three were cases of premature labour.

"The following is a brief account of the remaining seven cases of death which occurred:

"Mary Nowlan died of rheumatic fever a fortnight after delivery.

"Mary Cullen died of hemorrhage, occurring immediately after the expulsion of the child. Her death was almost instantaneous.

"Margaret Butler died in consequence of inflammation of the uterus and some of the adjacent parts.

"Judith Riley was extremely delicate on coming into hospital. Inflammation and sloughing of the upper and inner part of the uterus took place, which was not suspected during her lifetime; after death, on cutting into the diseased part, (which was not much greater in extent than the size of a crown piece,) it had much the characters of anthrax.

"Mary M'Dermot died of consumption three days after delivery, which she had been labouring under for a long period previous to her admission.

"Mary Maguire was admitted on the night of the 24th of July, 1830, and was delivered in two hours after. She was so ill from chest disease, apparently phthisis, that it was thought she could not survive the delivery. She died three hours afterwards; no examination was allowed.

"Judith Foy was labouring under bronchitis on her admission, which rapidly increased after her delivery: she sunk in two days.

"In one instance premature labour was induced in consequence of contracted pelvis, in a woman named Mary Fox, of diminutive stature. About fourteen hours after the evacuation of the liquor amnii, she had a severe rigor, which lasted for an hour. In twelve hours after, slight labour pains occurred; these continued for about 9 hours, when she was delivered. The child was born alive, but died in an hour.—*Dublin Hospital Reports, Vol. V.*

28. *Davy and Wollaston compared as Philosophers.*—In contrasting the genius of Wollaston with that of Davy, let me not be supposed to invite a comparison to the disparagement of either, but rather to the glory of both, for by mutual reflection each will grow the brighter. If the animating principle of Davy's mind was a powerful imagination, generalizing phenomena, and casting them into new combinations, so may the striking characteristic of Wollaston's genius be said to have been an almost superhuman perception of minute detail. Davy was ever imagining something greater than he knew; Wollaston always knew something more than he acknowledged:—in Wollaston the predominant principle was to avoid error; in Davy, it was the desire to discover truth. The tendency of Davy, on all occasions, was to raise probabilities into facts; while Wollaston as continually made them subservient to the expression of doubt.

Wollaston was deficient in imagination, and under no circumstances could he have become a poet nor was it to be expected that his investigations should have led him to any of those comprehensive generalizations which create new systems of Philosophy. He well knew the compass of his powers, and he pursued the only method by which they could be rendered available in advancing knowledge. He was a giant in strength, but it was the strength of Antæus, mighty only on the earth. The extreme caution and reserve of his manner were inseparably connected with the habits of his mind; they pervaded every part of his character; in his amusements, and in his scientific experiments, he displayed the same nice and punctilious observation—whether he was angling for trout, or testing for elements, he alike relied for success upon his subtile discrimination of minute circumstances.

By comparing the writings as well as the discoveries of these two great philosophers, we shall readily perceive the intellectual distinctions I have endeavored to establish. "From their fruits shall ye know them." The discoveries of Davy were the results of extensive views and new analogies; those of Wollaston were derived from a more exact examination of minute, and, to ordinary observers, scarcely appreciable differences. This is happily illustrated by a comparison of the means by which each discovered new metals. The alkaline basis were the products of a comprehensive investigation, which had developed a new order of principles; the detection of palladium and rhodium among the ores of platinum, was the reward of delicate mani-

pulation and microscopic scrutiny. As chemical operators, I have already pointed out their striking peculiarities, and they will be found to be in strict keeping with the other features of their respective characters. I might extend the parallel farther; but Dr. Henry, in the eleventh edition of his system of Chemistry, has delineated the intellectual portraits of these two great philosophers with so masterly a hand, that, by referring to the passage, all farther observation will be rendered unnecessary.—*Boston Med. and Surg. Journ.*

29. *The Anatomy Bill.*—The subjoined is the Anatomy Bill as it has passed through all its stages in both branches of the Legislature of this State, and received the signature of the Governor. As it is now the law of the land, we have thought that the profession would desire to possess a correct copy, which they have below.

Commonwealth of Massachusetts. In the year of our Lord One Thousand Eight Hundred and Thirty-one.

An Act more effectually to protect the Sepulchres of the Dead, and to legalize the Study of Anatomy in certain Cases.

Sect. 1. *Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That if any person, not being authorised by the Board of Health, Overseers of the Poor, or Selectmen, in any town of this Commonwealth, or by the Directors of the House of Industry, Overseers of the Poor, or Mayor and Alderman, of the City of Boston, in said Commonwealth, shall knowingly or wilfully dig up, remove, or convey away, or aid and assist in digging up, removing or conveying away, any human body, or the remains thereof,—such person or persons so offending, on conviction of such offence in the Supreme Judicial Court of this Commonwealth, shall be adjudged guilty of felony, and shall be punished by solitary imprisonment for a term not exceeding ten days, and by confinement afterwards to hard labor for a term not exceeding one year; or shall be punished by a fine not exceeding two thousand dollars to enure to the benefit of the Commonwealth, and by imprisonment in the common jail for a term not exceeding two years at the discretion of the Court, according to the nature and aggravation of the offence.

Sect. 2. *Be it further enacted,* That if any person shall be in any way, either before or after the fact, accessary to the commission, by any person or persons, of the offence described in the first section of this act, such person or persons shall be adjudged and taken to be principals, and shall be, on conviction of the Court aforesaid, subject to the same punishments and forfeitures as are in said first section provided.

Sect. 3. *Be it further enacted,* That from and after the passing of this act, it shall be lawful for the Board of Health, Overseers of the Poor, and Selectmen of any town in this Commonwealth, and for the Directors of the House of Industry, Overseers of the Poor, and Mayor

and Aldermen, of the City of Boston, in said Commonwealth, to surrender the dead bodies of such persons, except town paupers, as may be required to be buried at the public expense, to any regular physician, cduly licnsed according to the laws of this Commonwealth—to be by said physician used for the advancement of anatomical science; preference being always given to the Medical Schools that now are or hereafter may be established by law in this Commonwealth, during such portions of the year as *such* schools, or either of them may require subjects for the instruction of Medical Students:—*Provided always*, That no such dead body shall in any case be so surrendered, if, within thirty-six hours from the time of its death, any one or more persons claiming to be kin, friend or acquaintance to the deceased, shall require to have said body inhumed; or, if it be made to appear to the Selectmen or Overseers of the Poor, of any town in this Commonwealth, or to the Mayor and Aldermen or Overseers of the Poor of the City of Boston, that such dead body is the remains of a stranger or traveller, who suddenly died before making known who or whence he was: but said dead body shall be inhumed, and, when so inhumed, any person disinterring the same for purposes of dissection, or being accessary, as is described in the second section of this act, to such exhumation, shall be liable to the punishments and forfeitures in this act respectively provided:—*And provided further*, That every physician so receiving any such dead body, before it be lawful to deliver him the same, shall in each case give to the Mayor and Aldermen of the city of Boston, or to the Selectmen of any town of this Commonwealth, as each case may require, good and sufficient bond or bonds, that each body by him so received, shall be used only for the promotion of anatomical science; that it shall be used for such purposes only in the Commonwealth, and so as in no event to outrage the public feeling; and that, after having so used, the remains thereof shall be decently inhumed.

Sect. 4. *Be it further enacted*, That from and after the passing of this act, it shall be lawful for any physician duly licensed according to the Laws of this Commonwealth, or for any medical student under the authority of any such physician, to have in his possession, to use and employ, human dead bodies, or the parts thereof, for purposes of anatomical inquiry and instruction.

Sect. 5. *Be it further enacted*, That nothing in this act shall be so construed, as to give to the Board of Health, Overseers of the Poor, or Selectmen of any town in this commonwealth, or to the Directors of the House of Industry, Overseers of the Poor, or Mayor and Aldermen of the City of Boston, in said Commonwealth, any power to license the digging up of any dead human body, or the remains thereof, other than was possessed by them before the passing of this act, or is given them by the third section of this act.

Sect. 6. *Be it further enacted*, That the act passed March 2, 1815, entitled "An Act to protect the Sepulchres of the Dead," and also all other Acts, or parts of Acts, contravening the provisions of this Act, be and the same are hereby repealed *Boston Med. and Surg. Journ.*

Approved by the Governor, Feb. 28.